

NOVEMBER, 1940 - 25 CENTS

AMERICAN BUILDER

AMERICAN
BUILDING
PAPER

THE WORLD'S GREATEST BUILDING PAPER

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ABRA 11-40

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(A Simmons-Boardman Publication)

AMERICAN BUILDER

and Building Age

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SURFACE FINISH

Dramatically demonstrates the toughness and durability of the Bruce-Way Finish applied at the factory on Bruce STREAMLINE flooring. The "Scratch Test" is made by scraping a coin along a small piece of flooring oak, one end of which has been finished by ordinary methods, the other end finished by the Bruce-Way. The ordinary surface type finish scratches and chips away under the coin; the Bruce-Way Finish is not harmed because it is imbedded in the wood — not a brittle film on top of it.

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Gentlemen: Please send complete data on Bruce Factory-Finished STREAMLINE flooring and a Scratch Test Panel.

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Address.....

City..... State.....

PUBLISHER'S PAGE

Local Tax Policies

DURING recent months we have discussed on this page certain economic and business questions directly connected with current national politics.

This has not been done for partisan reasons, but rather for the purpose of clarifying the business issues involved in or affected by the dominant political and governmental policies of the present decade.

These policies, promulgated from Washington, have been nation-wide in their effects, reaching and conditioning the business operations of every reader of this publication.

On Tuesday, November 5, at the ballot box, each reader will have his opportunity to register his judgment for or against these policies as he sees them in relation to his business, national security and the general good. We can do no more than pray for intelligence and patriotism for the outcome.

TURNING now to something more local—closer home in its effects on the building business—we propose a subject that readers of this publication can influence more directly; namely, local taxes—real estate taxes, valuation methods and tax policies that in many places have stagnated home building and are developing blighted areas by driving home seekers out into the country to escape the annual raids of the tax assessor. These local taxes on homes, and the assessment practices back of them, are locally controllable; local building industry men can do something about them.

The real estate tax burden, pressed relentlessly on home owners by taxing authorities without regard for true property values, is forcing those owners and many new home seekers out of our cities into surrounding suburbs. Whether the blame lies on present officials or on existing laws, the net result is the same, according to a summary by the Federal Home Loan Bank Board, which declares:

"In either case, these taxes are discouraging new construction, often making it impossible within city limits; they are destroying the value of existing properties,

and are speeding unwarranted decentralization."

An example is cited of one northeastern city where the ratio of tax assessments to actual sales prices on houses is 150 per cent within the city limits and 106 per cent just outside its borders. Also an extreme case of unfair overassessment is cited of a single property in a New Jersey city, valued at \$6,200 by the Board's HOLC appraisers, on which this agency sought vainly to get a reduction from an assessed valuation of \$20,900.

The trend toward decentralization of some American cities is a natural one. But in others it literally is being forced by high tax rates, resulting in virtual condemnation of neighborhoods fully as attractive as many suburbs from a standpoint of living, and much closer to employment and established municipal facilities. This obviously is hurtful to the business future of these cities and to property values and the building industry.

The general problem, according to this Board study, is the tax burden which all city dwellers bear, as compared to suburban residents. Obviously, cities are going to be "abandoned," and decentralization is going to be intensified, if there is no relief from such existing tax burdens.

In the entire metropolitan area of one city, which the Board surveyed, residential building permits amounting to \$3,443,000 were issued in 1939, but only \$803,000 of the total was within the city limits. Certainly one reason for at least 80 per cent of the new home owners going outside the city was the difference in taxes.

READERS of this publication are generally leaders in local business and civic affairs and can do much to correct these unfair and destructive real estate taxing policies where found to exist. Effort now to strengthen local home building and home ownership will make a worth while contribution to the nation's security.

Samuel O. Dunn,



'INCOR' WINS OPENING RACE AT BELMONT

**SPEEDS COLD-WEATHER ALTERATIONS
WITH MINIMUM PROTECTION . . .
FASTER CURING, BETTER CONCRETE**



LATE last Fall, New York State legalized pari-mutuel betting. Belmont Park often called "the finest race-track in America," had to be streamlined in a hurry. By using 'Incor' 24-Hour Cement, extensive alterations were completed in dead of winter, under difficult job conditions. To illustrate:

Eighteen thousand sq. ft. of new 'Incor' concrete flooring was placed in the 3-tiered grandstand. Open to biting Long Island winds, with adequate protection next to impossible, concreting went ahead steadily, even at sub-freezing temperatures. Estabrook Construction Co., Hempstead, L. I., concrete contractor, maintained normal schedules straight through the winter, assuring on-time completion for season's opening.

Use 'Incor'* for cold-weather work; cut form costs, save up to 60% on heat protection, push winter work ahead on normal schedules. Write for copy of "Cold Weather Concreting." Lone Star Cement Corporation, Room 2233, 342 Madison Avenue, New York.

*Reg. U. S. Pat. Off.

LONE STAR CEMENT CORPORATION
MAKERS OF LONE STAR CEMENT . . . 'INCOR' 24-HOUR CEMENT

AMERICAN BUILDER

AND BUILDING AGE

Home Buyers and the Draft

REPORTS from many builders indicate that now and then a prospective home buyer is holding back because of fear that he will be drafted into the army and unable to meet his mortgage contract payments.

Here's the answer to such a person:

The chances of being drafted for a married home owner with children are one in a thousand.

At present, of course, all married persons even though registered have a deferred status as to actual call to service. Not only are married men and married men with children to be exempt, but the remote possibility of their being called is made still less by the fact that men with responsible positions will be among the last to be called in the event of any emergency. Statistics show that the average home owner is usually in this "responsible" classification.

In order to further protect buyers of homes Congress has provided for protection against the foreclosure of a mortgage for nonpayment of principal or interest while an individual is serving in the U. S. Armed Forces*.

FHA Continues Active

Further assurance for homebuilders with reference to the Draft also comes from the Federal Housing Administration. In an official news release dated Sept. 28 it was announced that men of military age may continue to buy, build or modernize homes under the FHA program, and lending institutions may continue to advance money for this purpose, just as they did before passage of the Selective Draft Act. In this release Administrator Stewart McDonald was quoted directly:

"There will be no discrimination by the FHA against men of military age, and there should be none by the institutions lending FHA-insured funds."

The FHA policy was explained by Mr. McDonald at the annual convention of the American Bankers Association at Atlantic City. Telegrams to the same effect were sent to the United States Savings and Loan League, the Mortgage Bankers Association of America, the Invest-

*TERMS OF MORATORIUM

A debt moratorium bill benefiting men drafted into the Army under the Selective Service Law was signed by President Roosevelt on Oct. 18.

The moratorium measure provides that the courts may suspend the operation of contracts, leases and other civil obligations of conscripted men who are unable to continue payments out of their \$30-a-month service pay. Its principal provisions cover: rent, installment contracts and mortgages.

Evictions from dwellings rented by draftees will not be permitted where the rent is \$80 a month or less a month. Installment-purchased goods may not be repossessed during the period of military service unless the compulsory service man agrees to such action. Mortgages may not be foreclosed while the draftee is in service.

ment Bankers Association, and the National Association of Mutual Savings Banks.

Mr. McDonald said: "Inquiries from many members of your association indicate they will be interested in a statement of Federal Housing Administration's policy concerning insured loans to citizens entering the military service.

"Legislation has recently been enacted by Congress to protect the interests of those called into military service. Needless to say the Federal Housing Administration is in complete accord with the objectives of such legislation and will follow an administrative policy which will preserve the rights of lending institutions under their insurance contracts and at the same time enable them to extend to those who enter military service the protection to which they are rightly entitled. We are amending our regulations so as to bring this about.

"During the emergency the Federal Housing Administration will welcome and accept applications for the insurance of mortgage or modernization loans on the same sound basis as in the past. In the extension of our insurance the possibility of entrance into military service by any prospective borrower shall not militate against him. There will be no discrimination by this Administration."

NOW is Still the "Time to Build"

Summing up the situation in regard to the effect of the draft on home ownership, it is safe to say that the odds are all in favor of home buying today. The direct effect of national defense expenditures, rearmament and the current upswing in business is to increase rents and raise prices. The individual who buys a home today anchors his housing cost at the most strategic time. There is nothing he can do that will have a more far-reaching effect on protecting his standard of living. Buying a home now at today's favorable prices and paying for it monthly "just like rent" is certainly the prudent course which builders can recommend to their friends and customers with full assurance.

Life insurance—Policies up to \$5,000 will be kept in force by the Veterans Administration during the draftee's term of service. In return, the United States will hold liens against the policies until the draftee repays the Veterans Administration.

Taxes—When a draftee can prove his inability to pay taxes, no tax sales of his property can be held until after he has completed his service. In cases where the property is sold by local authorities for nonpayment of taxes, the draftee can reclaim it not less than six months after re-entering civil life.

Automobiles and tractors—Placed in a special category. Cars and tractors cannot be repossessed if the draftee has paid more than 50 per cent of total contract price.

In all cases, the draftees will be required to pay up accumulated debts after the termination of service.

To Avoid Housing Shortages

CITIES and towns throughout America can help to meet the housing needs of the national defense program by pushing construction now under way and providing means to make the fullest possible use of existing housing facilities. Useful measures might include repair and modernization of older structures, registry of vacant rooms and houses and extension and improvement of transportation systems.

These are among the recommendations offered by the Committee on Housing of The Twentieth Century Fund in a special research report on defense housing. The report says, "It is important that current residential construction be encouraged and housing needs anticipated so that communities may face new conditions with as full inventories as possible. This is just as true of communities removed from defense activity as for those involved in it. All needed housing, wherever located, that can be produced now removes some of the strain in terms of demand for labor and materials which is almost certain to come later."

For cities and towns directly affected by armament activities the Committee sets forth the basic recommendation that these communities do their utmost to use the houses, neighborhoods and services they now have "before extensions of services and facilities are made or before new communities are established. Such a policy

would insure the fullest possible use of existing resources in government, education, fire and police protection, streets, utilities, transportation systems and the like before going on to extensions or new construction."

In outlining specific policies for communities in areas of defense activity, the Committee urges four main steps:

- a. The establishment of a registry service for vacant dwellings and for vacant rooms through the services of public and private local agencies.
- b. Local campaigns, through the same media, to encourage house-holders to make vacant rooms available to the market.
- c. Repair and conversion campaigns, utilizing the facilities of federal agencies, local lending institutions and municipal building departments in a coordinated endeavor.
- d. Stimulation of the development of additional transit facilities to assure that full advantage may be taken of the widest possible commuting area.

The Fund's Housing Committee says that local agencies and local committees should be made use of in these steps, and points out that modifications of present laws may be necessary in some communities. The Committee recommends that state and local government agencies may promote efficient use of community resources by:

- a. Revising zoning ordinances to make available, exclusively for housing, surplus lands now designated but not required, for commercial and industrial use.
- b. Instituting means for quieting tax titles and for liberalizing the powers of municipalities to acquire, lease, or dispose of lands; and for reassembling parcels in dormant or abandoned subdivisions.
- c. Developing land control regulations to facilitate the development of stable neighborhoods of low-cost dwellings.

"No Government Industrial Housing Needed Here," Buffalo Builders Association Reports

Buffalo, N.Y.

To the Editor:

In reading your article—"No Present Need Justifies Government Housing for Defense Workers," it occurred to me you might be interested in the situation as it affects Buffalo.

On Sept. 12th the "Buffalo Courier-Express" printed an article under bold headlines "Shortage Here of 5,000 Housing Units Hampers Plans for Defense," "United States Recognizes Need, Committee Told, Aid Expected." The committee was composed of Building Trades Union and USHA officials.

The Niagara Frontier Builders Association in conjunction with other organizations immediately went into action, assembling data on vacancies, number of housing units built and under construction at present time, also a survey of units to be built during remainder of this year, probable number to be produced during 1941, also maximum capacity for production in 1941 if needed.

We find no shortage of housing at present and there are available at present time approximately 2,000 units, about one-third of which are sub-standard.

There have been produced from Jan. 1 to Sept. 1, 2,155 units; at present rate of building, 1,438 more units will be produced up to Jan. 1, 1941. A conservative estimate of units to be built during 1941, based upon present demand and production, is 4,600. This is about 50 per cent of maximum

production capacity of Buffalo's residential builders.

More than 90 per cent of residential construction in this area is open shop. This accounts for the unions' running to Washington for more government funds to keep their union coffers filled. Also the Secretary of the Buffalo Municipal Housing Authority is Secretary and Treasurer of the Buffalo District Council of Carpenters, A.F.L.

There seems to be some hesitancy on the part of local FHA office to relax its stringent credit regulations in respect to borrowers whom it considers temporary employees engaged in defense industries. They are in large measure the people for whom we must produce extra housing.

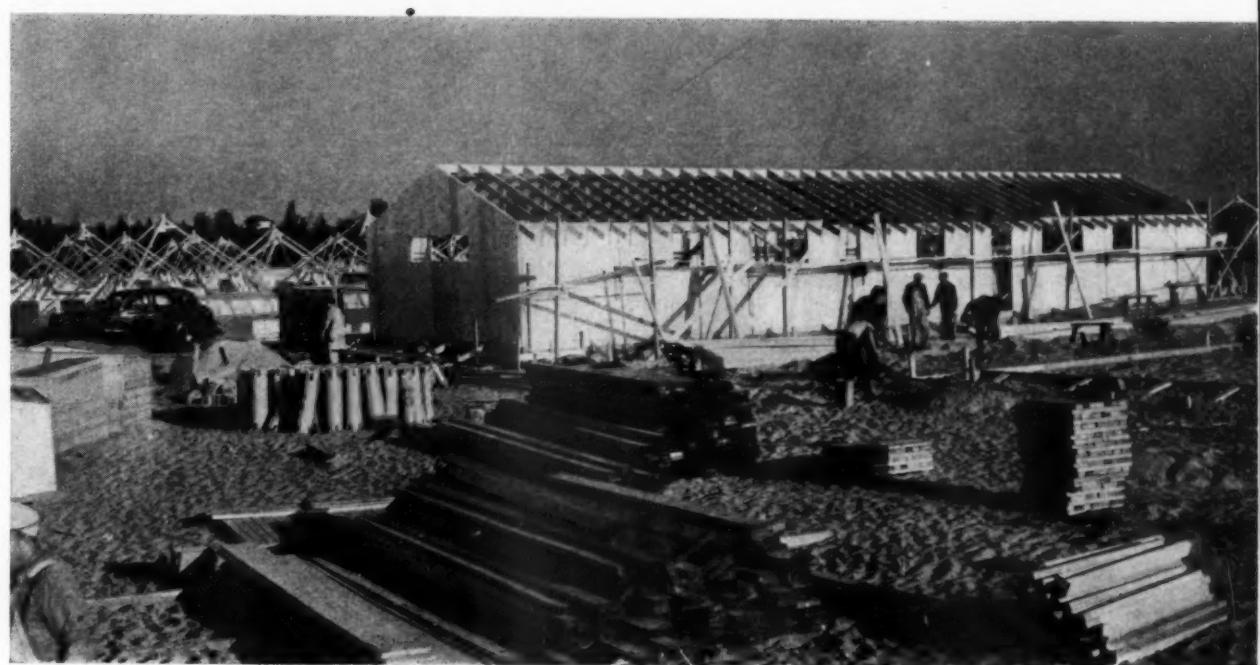
We are experiencing considerable difficulty and delays in securing lumber due to large government purchases for defense program.

Prices are advancing and we are also interested in knowing what is to be the official policy of FHA in regard to appraisals and commitments as building costs advance. This is very important to builders and to the nation. FHA has changed the entire home financing system and today the industry is indirectly controlled by that agency of government, and unless complete cooperation is assured and given, housing may well become a bottleneck in defense.

R. C. DEWEY, President,
Niagara Frontier Builders Association.

Acme
Photo

MILLIONS of dollars are being spent for Army barracks, with everyone working overtime to rush them to completion. Construction activity at Fort Dix, N.J., above, and Fort Hancock, N.J., below, is shown. Contracts are handled on cost-plus-fixed-fee basis.

Wide
World
Photo

Building Industry Feels Effect of Vast National Defense Program

Defense housing, Army barracks, private homes and industrial construction all get full-speed-ahead signals. Normal construction markets helped

WASHINGTON, D. C.—Some call it stupendous activity and others colossal confusion, but whatever it is that's taking place here in Washington, it is having a far-reaching effect on the entire building industry.

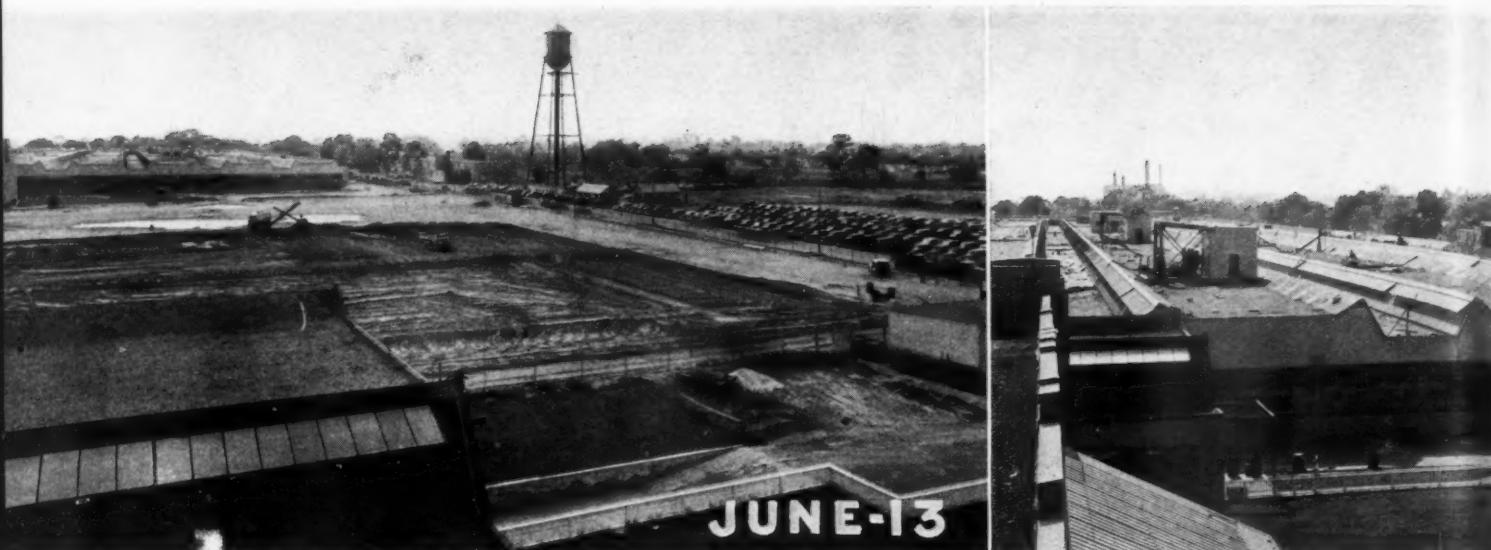
The significant feature of the rapid expansion of construction activity taking place is that private home building and private industrial and commercial building are increasing along with the vast government program.

To grasp what is happening to the building industry as a whole, let us consider four principal divisions of activity as follows:

1. Private residential building.
2. Army and Navy housing, such as barracks and cantonments.
3. Defense housing—housing for workers in defense industries and civilians connected with Army bases, airports and other government services.
4. Industrial and armament construction.

525,000 Homes this Year

Private residential building has shown vigorous advances the latter half of this year. Both building permits and contract awards have mounted higher each month. It is now estimated that the total number of nonfarm homes to be built in 1940 will reach 525,000 units—an 11 per cent increase over 1939.



FORTY WORKING DAYS only elapsed between the photograph at left, taken June 13, and the completed structure at far right. The building is

The bulk of the improvement in residential construction is in small homes financed under FHA and savings and loan plans. The prospects are very definite that expanding industrial and defense production, with consequent jobs and increased income for workers, will continue to swell the building of private homes. Defense Coordinator C. F. Palmer, speaking recently before the Central Housing Committee at Washington, stated that private industry is expected to handle the bulk of the defense housing program.

Army Barracks Rushed

Most spectacular in the present building activity is the construction of Army cantonments and tent camps. The size of this work is indicated by the fact that early in the program orders for more than 650 million feet of lumber were placed, and the final totals will far exceed this.

Construction is being handled by well qualified and experienced contractors operating under the cost-plus-fixed-fee plan, under great pressure for quick completion to house the new Army. Two types of housing are being provided by the Army:—cantonment type for troops stationed in the northern areas and permanent tent camps for southern areas. Of the 22 large troop housing projects for a division or more, now under way, 13 are of the permanent cantonment type and 9 of the tent camp type.

A typical permanent cantonment designed to accommodate one National Guard Division of approximately 19,000 officers and enlisted men costs approximately \$8,000,000, of which \$1,000,000 is for utilities. The following structures are involved in such a cantonment:

How to Qualify for Defense Construction

FOR DEFENSE HOUSING, write *Supervising Engineer, Public Buildings Administration of the Federal Works Agency, Washington, D. C.*, and ask for copy of *Contractor's Qualification Questionnaire, Form J 96*.

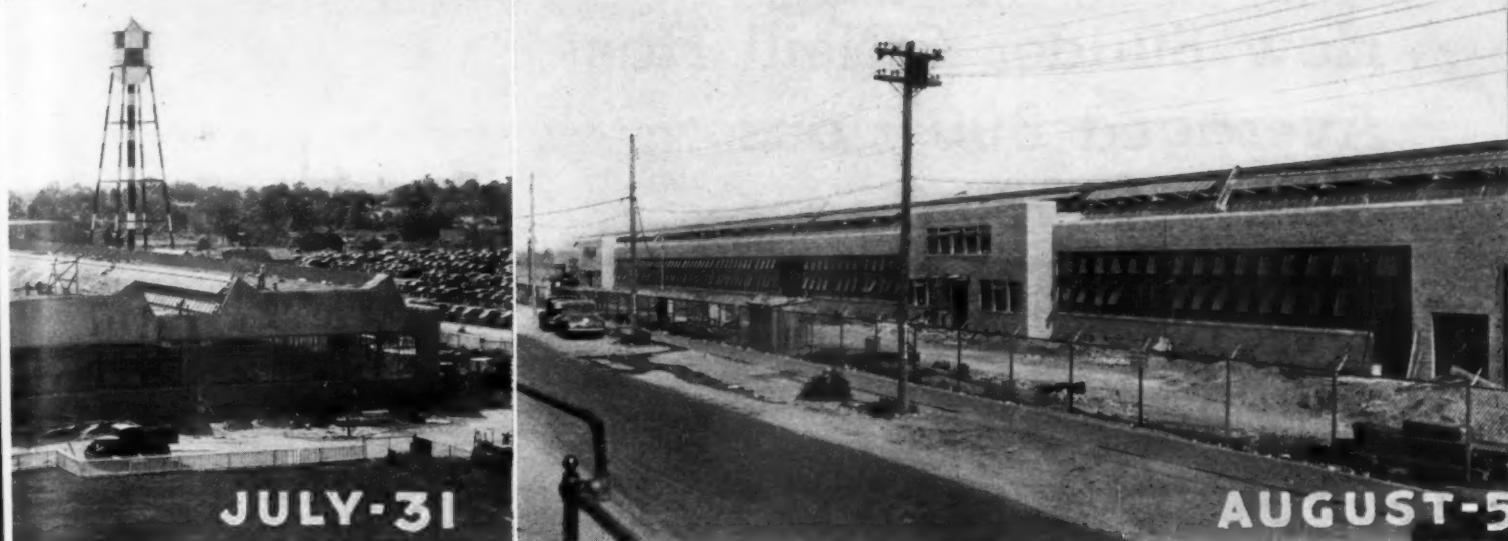
FOR ARMY CONSTRUCTION, write to *Construction Division, office of the Quartermaster General, War Department, Washington, D. C.*

Item	No. Required
Barracks, Incl. Lavatories.....	316
Mess Halls (170 men each).....	124
Storehouses (co.).....	130
Day Rooms (co.).....	130
Officers' Quarters (individual).....	4
Officers' Quarters (barracks type).....	24
Officers' Messes.....	12
Administration Buildings.....	15
Fire Stations.....	3
Guard Houses.....	11
Post Office.....	1
Telephone Building and Equipment.....	1
Radio Building and Equipment.....	(where req'd)
Post Exchanges.....	12
Theaters (1,000 seating capacity).....	2
Service Club.....	1
Recreation Bldgs. (1 per regiment).....	9
Warehouses.....	16
Motor Repair Shops.....	17
Gas and Oil Stations (12,000 gals. ea.).....	204,000 gals.
Utility Shop.....	1
Infirmaries.....	9
Hospital.....	750 beds
Laundry.....	1
Bakery.....	1
Refrigeration Plant (mechanical).....	1
Incinerator (10 ton).....	1
Magazines (ammunition).....	
Utilities.....	
Target Ranges.....	

The cantonments are being built according to plans which were perfected some years ago and are of standard frame construction. Of the first estimated requirements for 650 million feet of lumber, some 38 per cent are for dimension and framing lumber, 15 per cent flooring and wainscoting, 10 per cent siding and 37 per cent sheathing. Some 21 species of lumber are being used. More than 75,000 doors and 200,000 windows are required.

Contractors are required to pay prevailing union wage scales, with time and a half for overtime, and since the work is being rushed, this means that a considerable number of the men are working 40 hours a week at the established union scale and 30 additional hours at overtime.

(Continued to page 98)



the 640' x 280' east addition to Pratt & Whitney Aircraft plant at East Hartford. Turner Construction Co., builders; Albert Kahn, architect.

EXCERPTS FROM ADDRESS OF C. F. PALMER, COORDINATOR OF DEFENSE HOUSING, NATIONAL DEFENSE ADVISORY COMMISSION, BEFORE CENTRAL HOUSING BOARD, OCTOBER 5

This program has five general categories: (1) Private Housing, (2) the RFC equity purchasing plan, (3) Federal Works Agency, (4) USHA, and (5) the Armed Forces.

1. **PRIVATE HOUSING.** In general, to private industry is assigned the major portion of demand which can pay commercial rents or corresponding purchase payments where the need is considered to be a permanent one. In most of the areas this "private" portion is being taken up at various rates by building and remodeling dwellings. FHA Mortgage Insurance and Savings and Loan Associations are very important factors in this field. We are establishing a current inventory to see how completely this market is being supplied.

Private capital is being encouraged to act by leaving to it the entire field of housing for sale. Governmental operations are now confined to rental projects. In most cases, the rent per month will be higher than the installment under the monthly purchase plan.

2. **RFC EQUITY PURCHASE PLAN.** The allocation of \$10,000,000 to RFC Mortgage Company provides equity capital so that work on housing projects can be commenced immediately in areas where the need to house workers engaged in national defense activities is acute and is not otherwise being met.

These funds can be supplemented by \$40,000,000 through the proceeds of mortgages on such projects insured by FHA under Section 207 of the National Housing Act, making a total of \$50,000,000 immediately available. This plan is designed to produce houses more quickly than can otherwise be done, with subsequent resale of equities as rapidly as possible.

Land contracts and options have already been signed in some instances. Active negotiations are proceeding in 14 areas on both coasts at the present time where there is a reasonable likelihood that these rental developments can be absorbed permanently into the community patterns.

3. **FEDERAL WORKS AGENCY.** The third main category will take care of temporary need which none of the other measures are prepared to provide, and which requires direct construction by some Federal agency other than the Army or Navy. The Lanham Bill is aimed at this category of defense housing need, and places administrative responsibility in the Administrator of the FWA. Farm Security may come into play and make available its splendid experience and facilities where housing has future rural use. WPA will also be available for construction of utilities.

4. **USHA-LOCAL AUTHORITIES.** In the case of defense housing needed for families of low income, unable to pay commercial rents, and particularly for families of enlisted personnel and low-income industrial workers, where competent local housing authorities exist and where funds are

available, it is proposed to make use of such local authorities and of the United States Housing Authority.

5. **ARMY AND NAVY.** In general, the best-defined needs for defense housing in connection with specific defense activities are those reported by the Navy and the Army.

It is understood that the Navy will itself build and manage most of its defense housing projects, with assistance from local housing authorities in some cases, and with recognition of the principles above outlined in all cases. The same is true of the Army, except that the Army will use Federal agencies for construction more extensively than the Navy.

Financing

Legislation and cash are needed for such a program. We now have both. The first Ten Million came from the President's emergency funds and went to the RFC Mortgage Company with which to buy equities. As a result, definite progress is already being made in 14 areas as previously explained.

Next \$100,000,000 was secured through an amendment to the Defense Bill. Here is how \$95,340,000 of that money is already being used.

Under way are a 12,640-dwelling unit program for the Navy, plus 700 units for Maritime Commission, and a 13,900-dwelling unit program for the Army. These will provide housing for low-income civilian and enlisted families connected with naval and military establishments. A large proportion of this need is "temporary" and none of it in the field either of private enterprise or RFC.

Thus, these three agencies, with various assistance from Federal and local agencies, are moving rapidly into the construction of 27,240 dwelling units of defense housing in 110 of the most urgent and critical situations; units which private enterprise could not produce because of the special or temporary nature.

In addition to the above we have the Lanham Bill, our most comprehensive piece of legislation. It meets the needs admirably and provides \$150,000,000.

To sum up, after we repay the \$10,000,000 which the President advanced to RFC Mortgage Company from his emergency fund, we have left \$290,000,000 with which to do what? With which to attack the reported need of 128,791 units in 216 cities of 39 states and 8 possessions.

From facts before us we believe the need will run 160,000 to 200,000 units. If the latter, at say an average of \$3,500, the total cost will be \$700,000,000. We have \$290,000,000. Consequently, it is self-evident how heavily we must lean on private enterprise.

How Builder O'Neill Has Averaged 300 Houses Yearly for 30 Years

Detroit Contractor Will Soon Build and Sell His Home No. 10,000; Volume Quality Building, Standard Plan, Forty-Foot Lots, Are Usual Practice

BUILDER
O'Neill, head
of successful
Detroit firm



OVER 250 homes were completed in 1939, another 250 or more are being built in 1940, by that aggressive Detroit contractor, Dennis O'Neill and his sons Norman and Robert, operating as Dennis O'Neill, Inc. After 30 years in the building business, contractor O'Neill is well on the way towards building his ten thousandth home (this is enough homes, by the way, to house a city of 40,000 people).

Some of the reasons for the O'Neill's success in building a good product at a low price—and marketing it in substantial volume—are apparent in examining their 1940 building operations.

We find their entire building activity concentrated in one section of Detroit; this simplifies supervision and cuts time of workmen in traveling from one job to another.

All O'Neill-built homes of today are of the five-room brick veneer type that sell for around \$5400, lot included. The 1940 O'Neill project embraces five different types of houses, with identical floor plans but different exteriors. Obviously, this floor plan was first studied out with care, then developed through experience, and sales prove it finds ready acceptance among buyers. By offering five different front elevations, a range of choice is offered to prospects—a variety that is proving adequate to meet the varying tastes of prospects in the price class to which this builder is catering.

After an active building program during the boom days of the prosperous twenties, and a period of relative inactivity during the early thirties, the O'Neill's began a new speculative building program in 1937 with the purchase of twenty lots in a row, and the erection of a group of Cape Cod homes. The project was completed in three months, and sold out almost immediately.

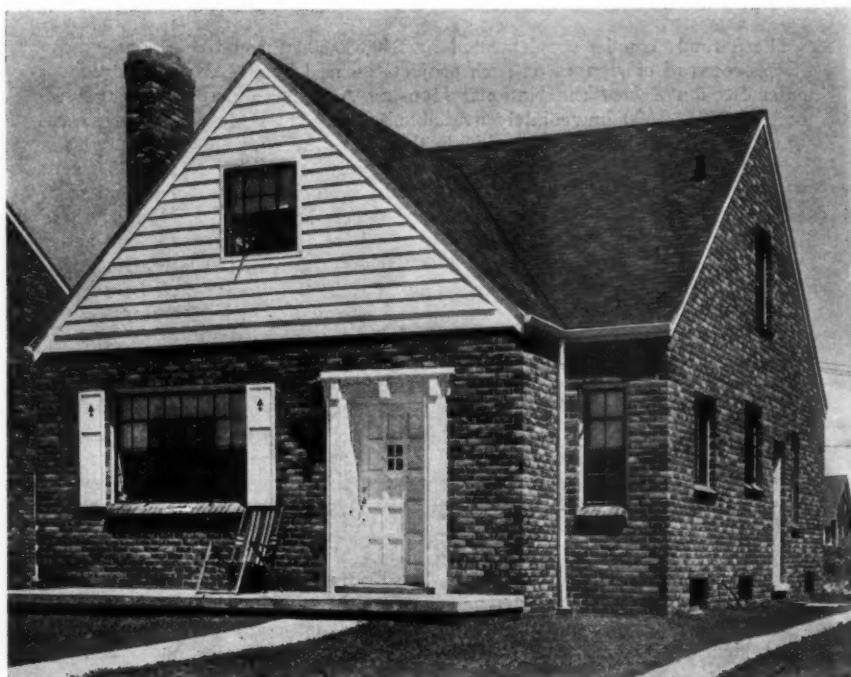
Following this, the O'Neill's launched a succession of similar projects, buying solid streets or complete subdivisions, building on them groups of substantial homes for the moderate-price field, and selling them in most cases before the homes are completed—often before the steam shovel is out of the basement excavation.

O'Neill houses are modern through-

out, of brick veneer construction. All the five rooms are on one floor. Three windows are placed in the unfinished attic for additional rooms to be partitioned there if desired.

Apart from the use of salable designs and the appeal of sound value, Mr. O'Neill attributes much of his success in selling to the provisions made for permanent living comfort in the homes he offers for sale. "Take the windows, for instance," he says. "We're installing Fenestra steel casements in something like 90 per cent of the homes we build. And we find that the woman, who is usually so important in determining the selection of the home to be bought, is particularly quick to appreciate the advantages of more light due to the greater glass area, and the better ventilation provided by these windows. She also appreciates the continuous ease of opening and closing steel sash. Further, she feels that she has a modern home if it is equipped with this type of window. The point is, however, that we try to get Mr. and Mrs. Prospect to think of the windows, not just as a feature of the home that can be taken for granted, but as a source of more light and more air that will add to comfort and livability every day in the year. Heat and air conditioning in most of our homes is provided by a Michigan Gas furnace, so placed in one corner of

(Continued to page 102)

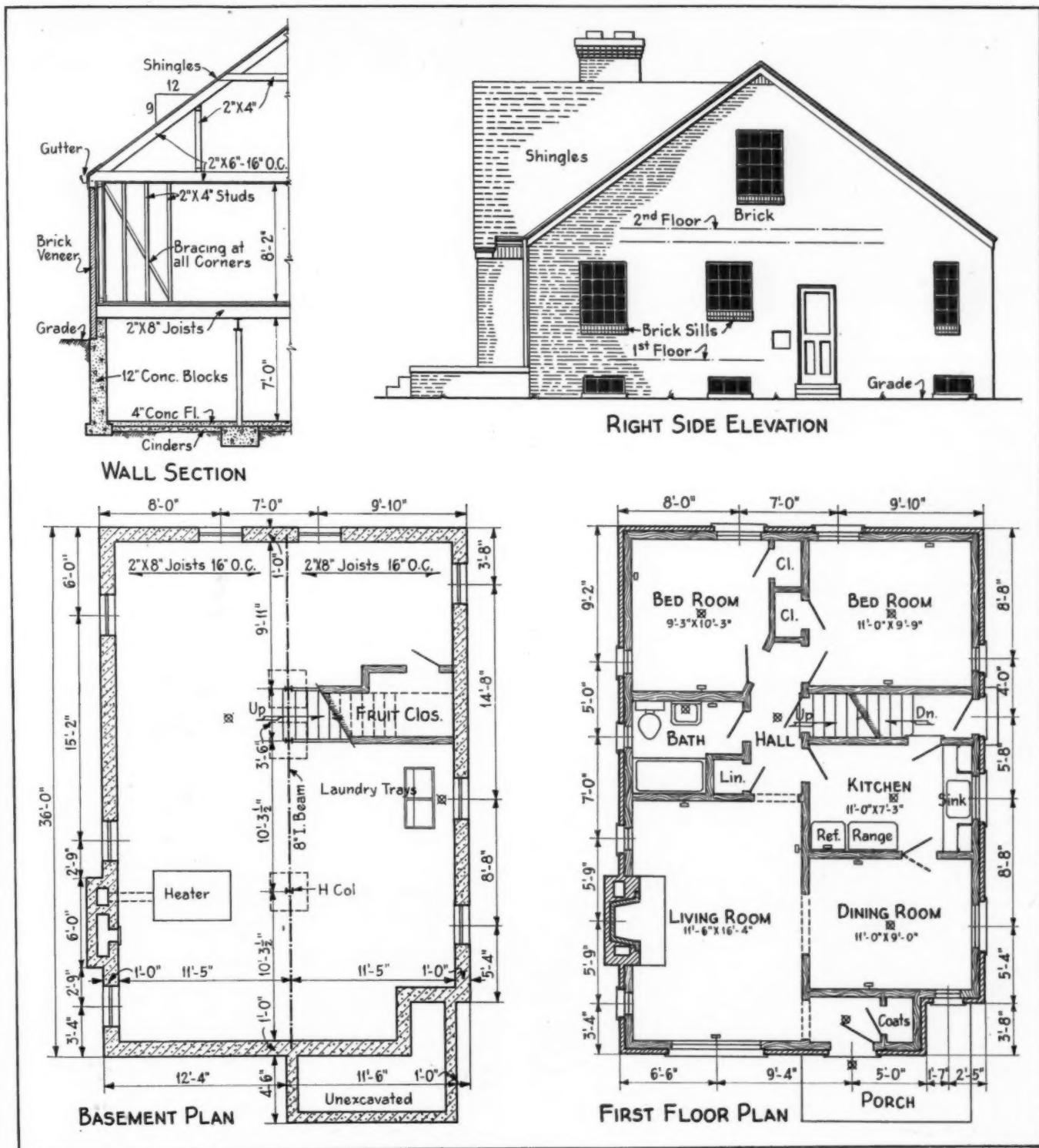


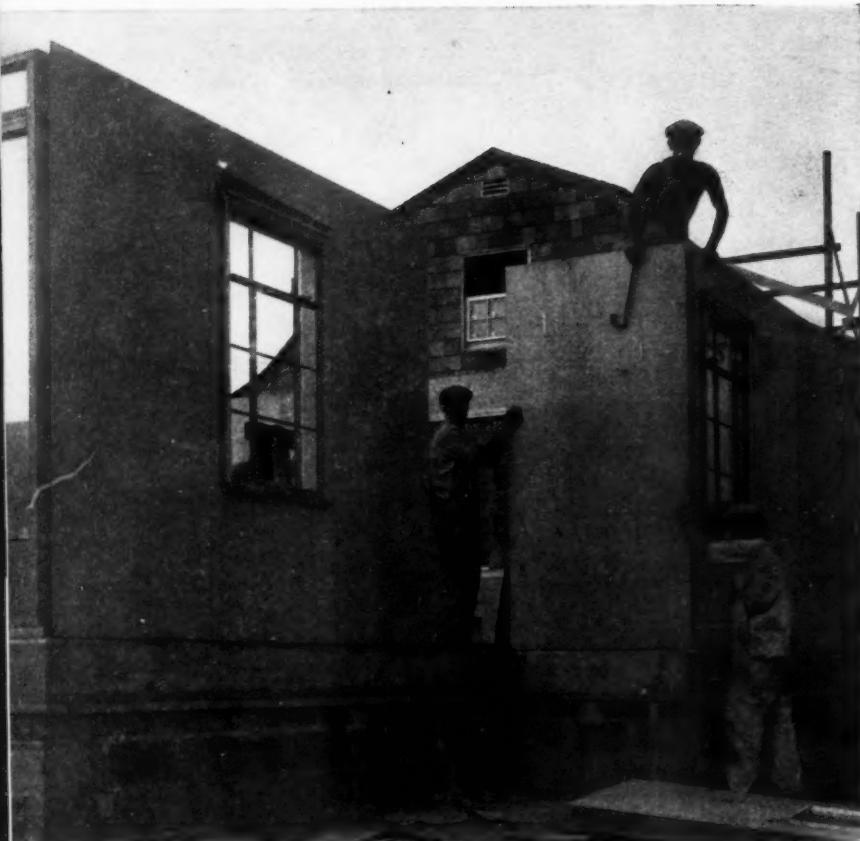
TYPICAL O'Neill five-room home, with plans as shown opposite, is attractively detailed on the exterior and compactly arranged inside.



LEFT: Two further exterior variations of the O'Neill basic house achieved with bay, dormer, porch.

THE popular O'Neill plan, with side elevation and section, presents details of this livable small home.





4' x 8' PLYWOOD wall panels are easily handled.
Average house is completely enclosed first day.

WHEN I visited Radrock Estates at Fair Lawn, N. J., late this fall, the first things I saw were long rows of foundations already in, and the construction crew busily engaged in building more before freezing weather sets in.

"What's the idea of getting so far ahead with your foundations," I asked Bill Whyte, Jr., in charge of construction.

"We're getting ready for old man winter," he said. "We expect to keep our crew busy right through. That's one of the *big* advantages of our shop-built panel method of construction."

A Scientific Job

Radrock Estates is a 50-acre residential development where 200 homes will be built by the W. H. Whyte Construction Co. Some 65 houses have already been built and sold—all of them constructed of substantial 4' x 8' plywood panels built in Whyte's own shop in Hackensack.

The W. H. Whyte Construction Co. is more than 50 years old, having been founded by the father of the present head of the company, W. L. Whyte. The firm has been noted for substantial quality work in high-priced residences and commercial structures, and it has brought an unusual background of experience to the small home field in its new Radrock Estates development.

The system of construction being used in Radrock Estates is the result of several years of thorough study and exhaustive tests, and is the particular "baby" of W. L. "Bill" Whyte, Jr., engineer in charge of construction, and H. D. Whyte, another son, who is in charge of design and shop work.

So the building method I am about to describe is not

SHOP BUILT Panels to Outwit Winter

Whyte Constr. Co. of Fair Lawn, N. J., develops effective method to eliminate cold-weather delays. Has sold 65 houses in Radrock Estates; will build 40 this winter

By Joseph B. Mason

the crack-brain scheme of some crowd of theorists. It is the studied and thoroughly tested result of years of experience plus a knowledge of materials and methods.

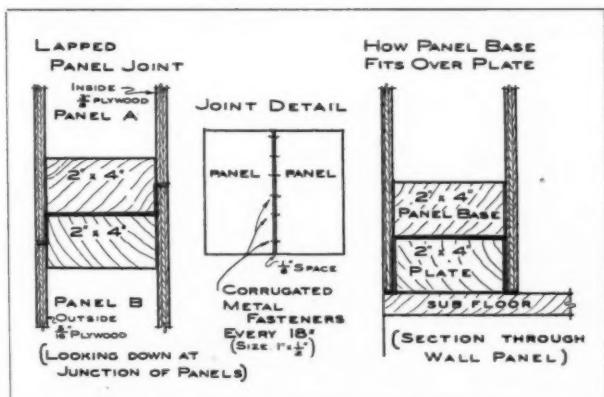
When the Whytes decided to embark on the Radrock development they decided to make every use possible of the large and well equipped workshop they own in Hackensack adjacent to a lumber yard. In this workshop they set up a series of jigs or tables especially designed for the construction of 4 x 8 wall panels. They engaged an outstanding residential architect, R. C. Hunter of New York and Fair Lawn, N.J., to design a



FAST electric power saw on the job handles miscellaneous cutting. The Whyte shop in Hackensack is completely equipped with woodworking equipment including saws, joiners and sanders.



WHYTE'S WORKSHOP where wall panels are built under controlled conditions. Angle irons on tables hold studding in place as plywood is "stretched" and nailed. Rolls of building paper and blanket-type insulation are convenient; at far right, putting on interior door trim.



WEATHERPROOF lapped joint where panels come together is shown above, as well as manner in which panel base fits over 2 x 4 plate. Joint detail shows how 1" x 1/2" corrugated metal fasteners are driven into wood across joint between plywood interior panels.

group of attractive small homes. They worked out on the drafting board the complete details of these houses and prepared shop drawings for them, using the standard plywood panels.

After several years of experiment and trial they perfected the system and went ahead with the first 10 houses. The standard panel sections were built in a shop, complete with doors and windows installed and with exterior and interior trim applied. When the foundations were ready they were taken out to the site and a typical house was usually completely enclosed in one day.

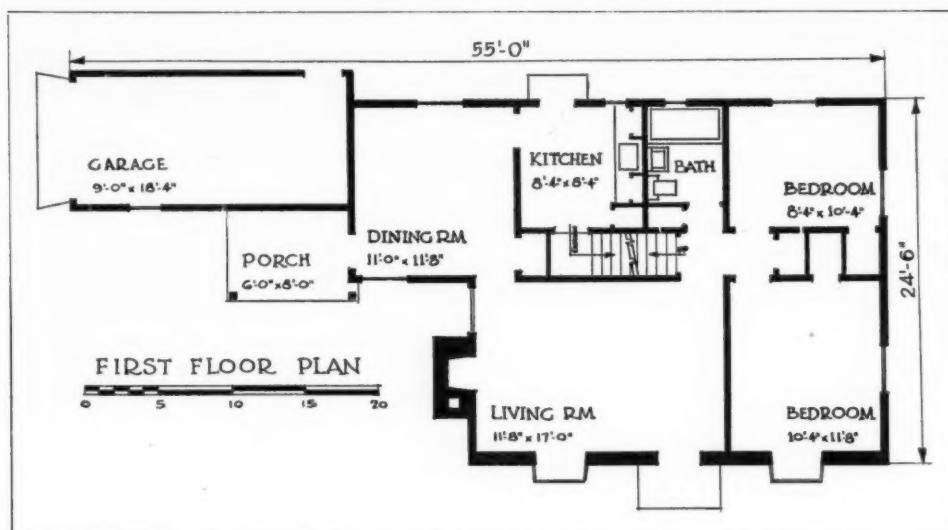
In the past year some 65 houses have been built and sold, and the Whytes now believe they are ready



BILL WHYTE, JR., supports typical 4 x 8 plywood wall panel with window installed, complete with *inside* trim. Note how edge of panel projects to overlap next section.



Photo by Adolph Studly



Radrock Front Cover Home

LONG, LOW and attractive Colonial designed by Architect R. C. Hunter dominates the entrance to Radrock Estates. Native New Jersey stone was used. Although constructed of standardized plywood panel sections built in the Whyte shop, it has an architectural appeal equaling or surpassing most individually planned homes. TruCost figures for these designs appear elsewhere in this issue.

to go ahead in a big way. They expect to build 40 houses this winter. Once they have the foundations in, they can keep their regular crew at work all winter building the panels and a large part of the interior millwork and trim. Since the houses can be erected and enclosed in practically any weather they can ignore old man winter.

How Panels Are Built

Each wall panel consists of a stout framework of 2 x 4's, with 5/16" standard Douglas Fir Plyscord sheathing on the outer side and 3/8" Plywall plywood on the inside. Tightly fitted in the center of the panel is a layer of Kimsul blanket-type insulation. Layers of Sisalkraft building paper are placed under both plywood surfaces. The plywood is nailed to the studding with 6d finishing nails.

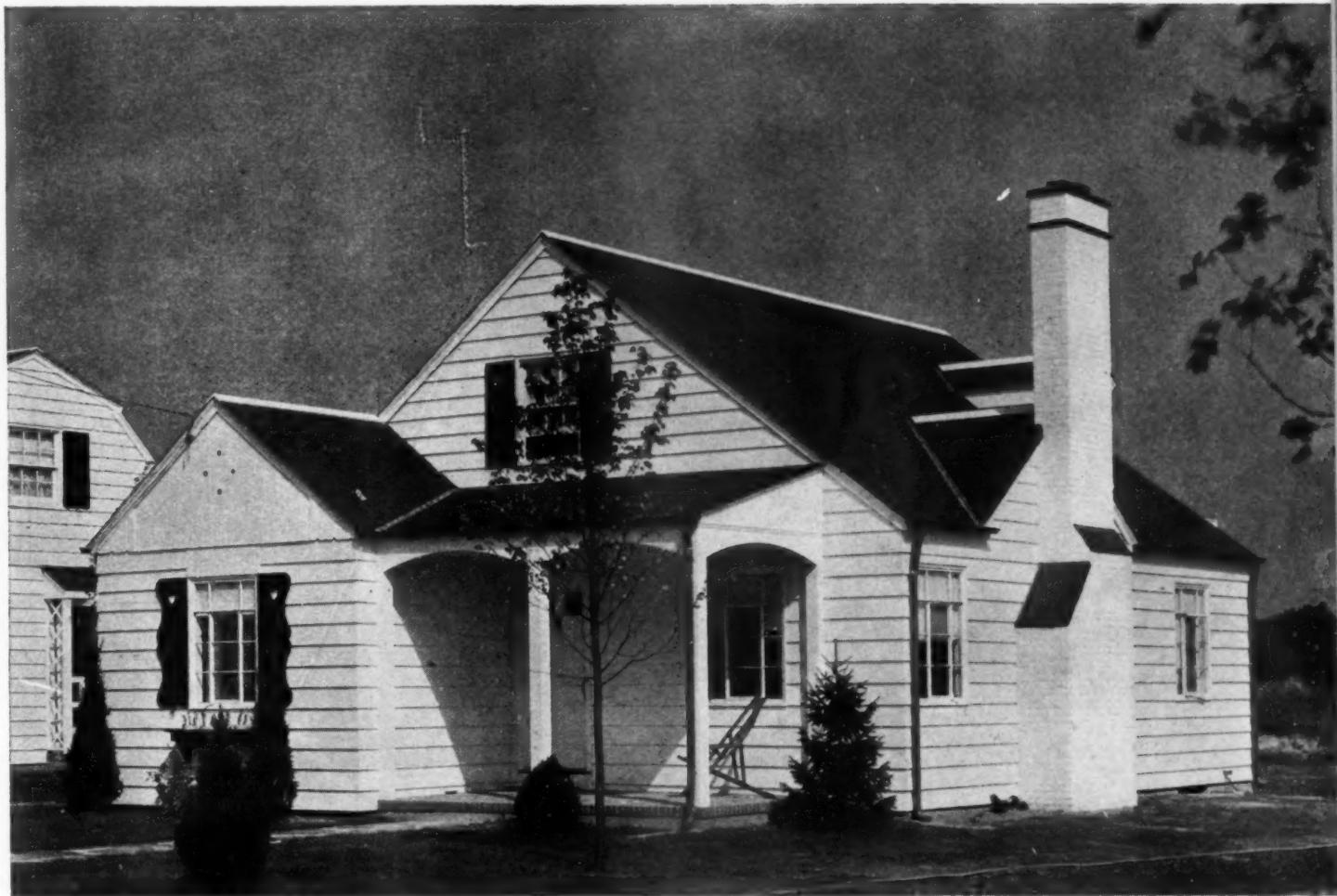
The result of this construction is a plywood section that is built like a truss and is more than four times as

strong as ordinary diagonal sheathing construction. It is extremely tight and durable.

The plywood projects over the studding frame enough so that the panels overlap. The plywood of one panel is nailed upon the studding of the adjacent panel when erected. (See detail drawing.)

Construction of the panels as it takes place in the workshop as pictured is a highly scientific and carefully worked-out procedure. Steel angle irons screwed to the top of the work tables locate the placing of the studding automatically. The studding are cut to exact size, then set in place between the angle iron guides and securely nailed together. A layer of building paper is then pulled into place from a roll at the foot of a bench and the exterior plywood nailed in place. The panel is then turned over and the blanket insulation put in position. Another layer of building paper is then stretched over the frame and the interior layer of plywood applied. The plywood is literally stretched to eliminate any warp

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WHYTE CONSTRUCTION CO. and R. C. Hunter, architect, have produced this attractive Colonial in Radrock Estates—a good seller.



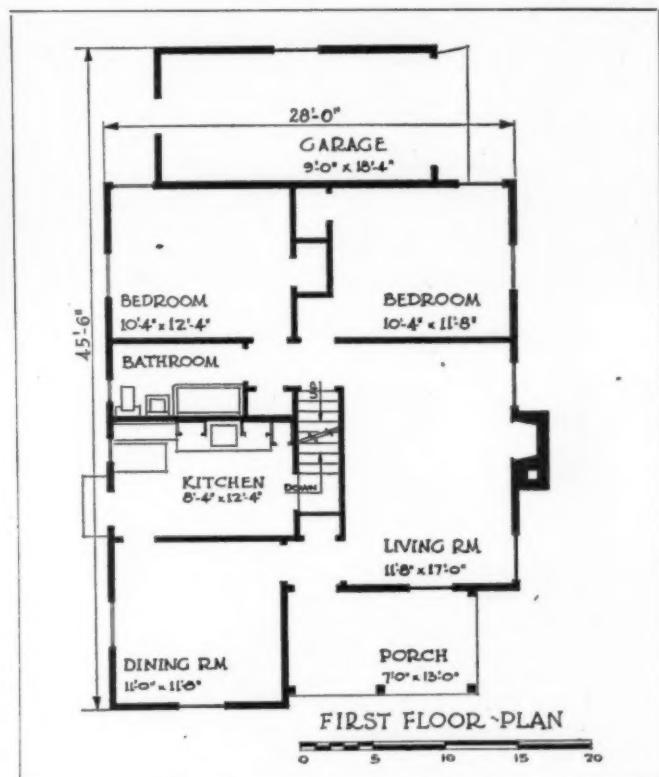
DRY-WALL construction is featured in the Radrock sign.

or bulk. It is nailed in the center first and then out towards the edges.

Trim Applied in Shop

Under the standardized procedure set up, the construction of panels in this fashion goes ahead very rapidly. An important feature is the construction of panels in which are located doors or windows. These are fully framed in the shop, the doors and windows installed and the interior and exterior trim applied. Doing this work under the controlled conditions of the workshop makes it possible to get an extraordinarily weathertight, permanent job. The trim is then given a prime coat, and the panel is ready for delivery to the site.

In some cases a bay window, complete with decorative details on the outside and a built-in seat on the in-



WELL ARRANGED floor plan of this shop-built plywood house puts kitchen and dining room at front, bedrooms at rear away from street noises. Bathroom is conveniently located off hall.



side, is constructed. The "fussy" details of this sort of work can be done much better on the workbench than on the site.

By scheduling work carefully, the Whytes are able to keep their crews working steadily all the time. At times they may have panels for 5 or 6 houses piled in the shop. When the foundation is ready the panels are taken and delivered by their own truck, unloaded and immediately erected. Erection crew consists of 4 carpenters and 2 helpers. The panels slide into place and lock tightly, and are then securely nailed together.

In the interior finish the Whytes have perfected their work to a high degree. Because the panels are absolutely square they fit together tightly. Once in place there is no possibility of movement, settling or shrinkage—which are the principal causes of cracks. The interior surface plywood is given a Rezite treatment at the factory, which makes it moisture resistant. At the site the interior surface is then given a prime coat of lead

and oil and the joints reinforced and carefully spackled. A final finish of wall paper is then applied, except in certain rooms where paint is desired by the customer.

An important detail in the Whyte method of treating the joints is the use of 1" x 1/2" corrugated metal fasteners which are driven into the wood across the joint every 18". These simple little fasteners are the type used in holding wooden box corners together. They are driven deep into the wood and covered with spackle and paint. (See detail.)

The test of the success of their system of treating joints is the fact that after more than a year in use there have been no signs of cracks appearing and no complaints by owners.

To observers in the building field who have seen many new methods of building homes come and go, the results achieved by the Whyte Construction Co. are very impressive. The firm has large real estate holdings adja-

(Continued to page 96)

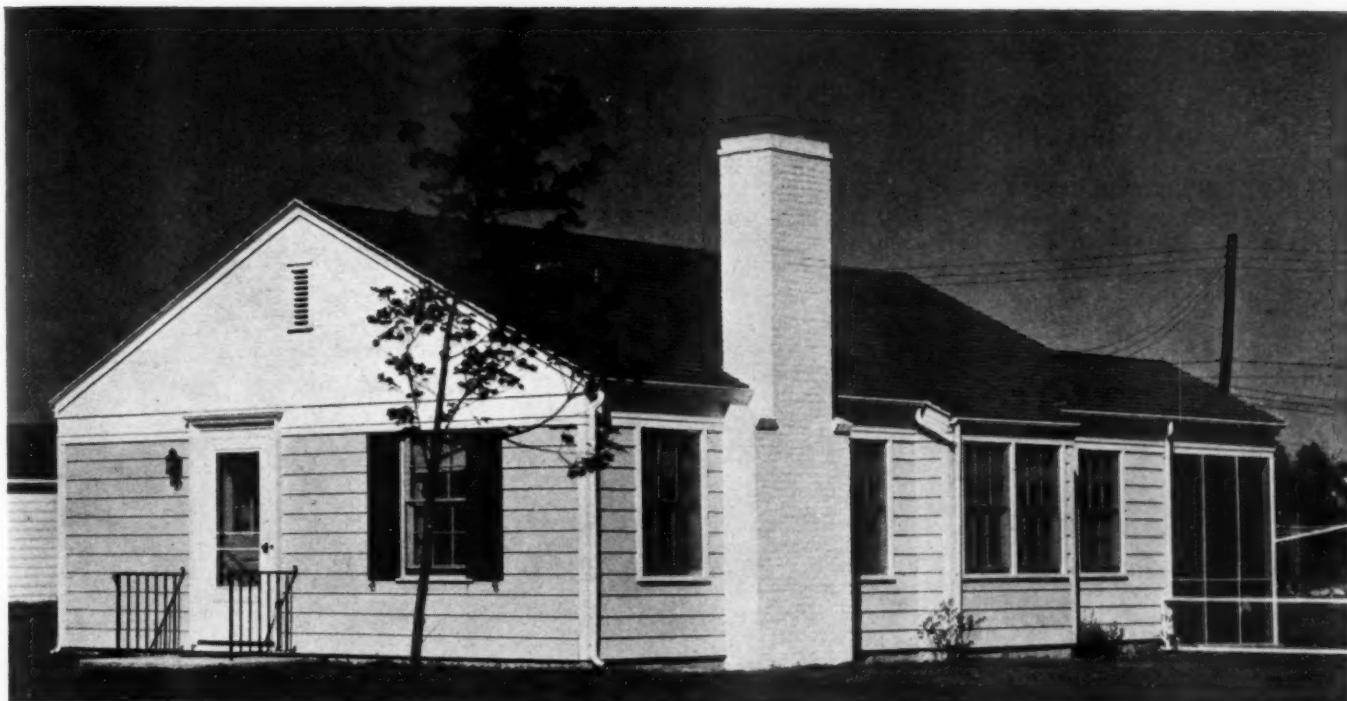
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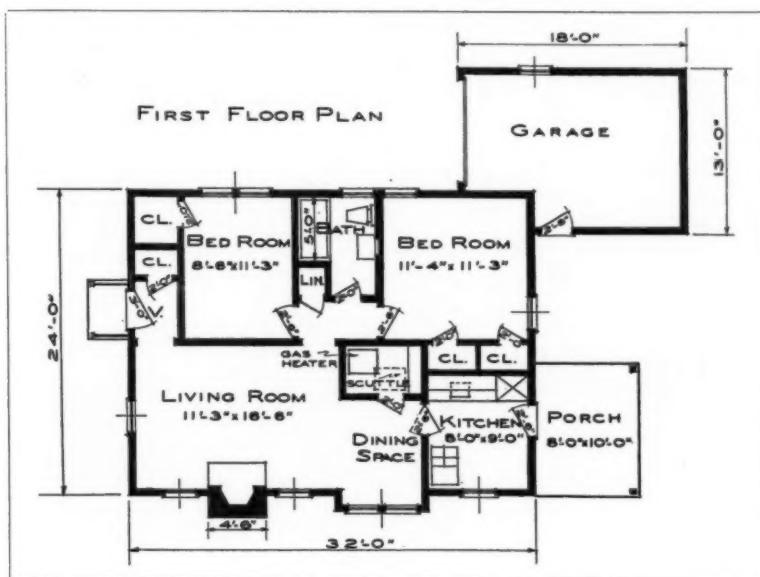
Standardized Panels Need Not Prevent Attractive Design

THESE TWO nicely detailed small Radrock Estates homes have approximately the same floor plan yet much different looking exteriors. This is true of all the houses at Radrock and is all the more remarkable since they are built of standardized shop-built plywood panels. Whyte Constr. Co. has effectively shown that standardization of production does not necessarily require a modernistic or uniform exterior. Floor plan is compact and efficient. Kitchen-bath arrangement economical and good. R. C. Hunter, Fair Lawn, N.J., architect.

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FINE LINES and an unusual 24' x 32' floor plan feature this Highland Village home designed by Architect C. Storrs Barrows. Dining alcove adds to spaciousness of living room. Gas heater is in utility closet.



Time and Money Savers Attract Rochester Buyers

Cellarless houses feature 2" plank floors, automatic heat, fingertip hot water control, 4" insulation, dry wall construction

THE builders of Highland Village in Rochester have met with substantial success as the result of adopting many unusual, up-to-the-minute ideas in planning and equipping their houses.

They believe that *low upkeep cost* is of foremost importance to owners, and to achieve this end believe it pays to spend a little more on first cost in order to achieve substantial savings over many years. For example, the houses are insulated throughout with 4" mineral wool bats, and all doors and windows are tightly weatherstripped and equipped with storm sash and combination screen and storm doors with zip-in screens. Most of the houses have gas heat, and the result of the tight construction has been that fuel costs have run well under preliminary estimates of the gas company.

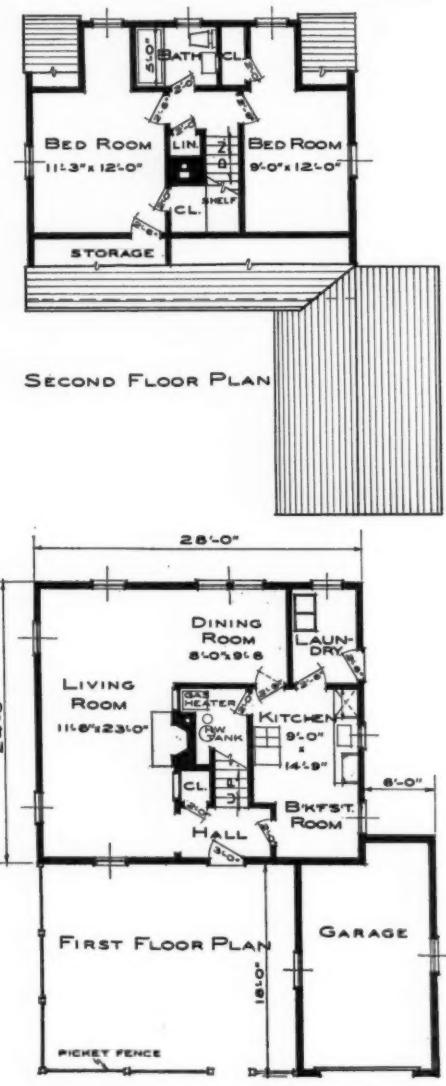
To insure low hot water heating costs the builders have installed the Savutime control of gas water heaters manufactured by the Savutime Sales Co. of Rochester. This device enables the housewife to turn on the gas heater

by pushing a button in the kitchen or bathroom. An immediate supply of hot water is provided, and a red light glows while the gas is turned on. The bother of running up and down stairs to turn the gas heater on or off is eliminated, but at the same time the owner is assured of fuel economy because the gas is turned on only when hot water is needed.

Highland Village is the result of an unusually effective combination of a reliable builder and a gifted architect, operating under the name of The Brighton Group, Inc. The builder, Emil Muller, has had many years of experience in residential construction. The architect, C. Storrs Barrows, is experienced in residential projects covering the past 20 years, many of them showing unique and different types of construction. Lathrop D. Marsland, attorney, is president of the company. The selling is handled by Benj. K. Steele. Late this summer 22 houses were completed or under construction—all built to meet buyers' individual requirements. (Continued to next page)



ALTHOUGH ONLY 28' x 24' in size, this nicely detailed Colonial has a remarkably spacious living-dining room arrangement and a fine kitchen-breakfast room plan. Gas heater is in exact center of house next to chimney. Emil Muller, builder.



A PUSH of the button in kitchen or bath turns on gas water heater, and red light glows while gas is on. Assures low fuel bills, eliminates running up and down stairs.

Photos by Chick Studios



Among the usual construction features of Highland Village homes is the plank floor construction. The floors consist of 6 in. steel I beams on 4 ft. centers, over which is laid 2 in. planking. A finish floor of Bruce prefinished oak is laid over the planking. This system produces a substantial fire-resistant and crack-proof floor.

Houses are dry-built, using $\frac{1}{2}$ in. gypsum board with taped joints. As a result of the construction methods employed the houses have been free from normal shrinkage and cracking.

Most of the Highland Village homes are basementless. A ventilated and heated 2 ft. 6 in. air space is allowed. The bulk of the houses are heated with Janitrol and Bryant gas winter air conditioning units located in a closet or utility room near the center of the house. Ample and scientifically designed ducts assure a large air circulation, and cold air returns are taken off the floor for warmth.

Other products and equipment insuring quality construction in these moderate cost homes are Morgan trim and woodwork, Overhead garage doors, Bennett recirculating fireplaces, zip-in

screens, No. 1 fir framing, Bull-dog electric panel. Unique balances, weatherstripping.

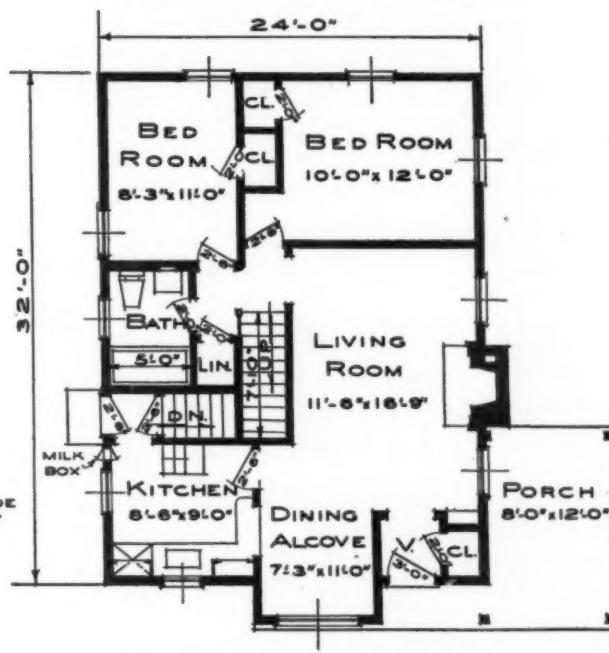
The planning and layout of the development is carried out with great skill, with houses arranged in a variety of ways on the wide plots of ground. Architect Barrows has done a splendid job in making these houses architecturally attractive and easy to live in. As the floor plans of several houses illustrated with this article indicate, the usual size is only 24' x 32', and in one model the overall dimension is only 24' x 28'. Yet by the use of an "open plan" with the dining space opening off the living room Barrows has achieved a sense of spaciousness in these houses that is quite remarkable. He has made use of the most up-to-date planning techniques, which in some cases call for placing the kitchen, dining and service areas at the front of the house and the living room or bedrooms at the rear away from the street. All of the houses are executed in a charming Colonial style which has met with wide popular approval. In addition, both exterior and interior color schemes have been worked out in cheerful and interesting modern color schemes that do much to increase their appeal. Picket fences, old fashioned lanterns and Colonial architectural details carry out the atmosphere of the project.



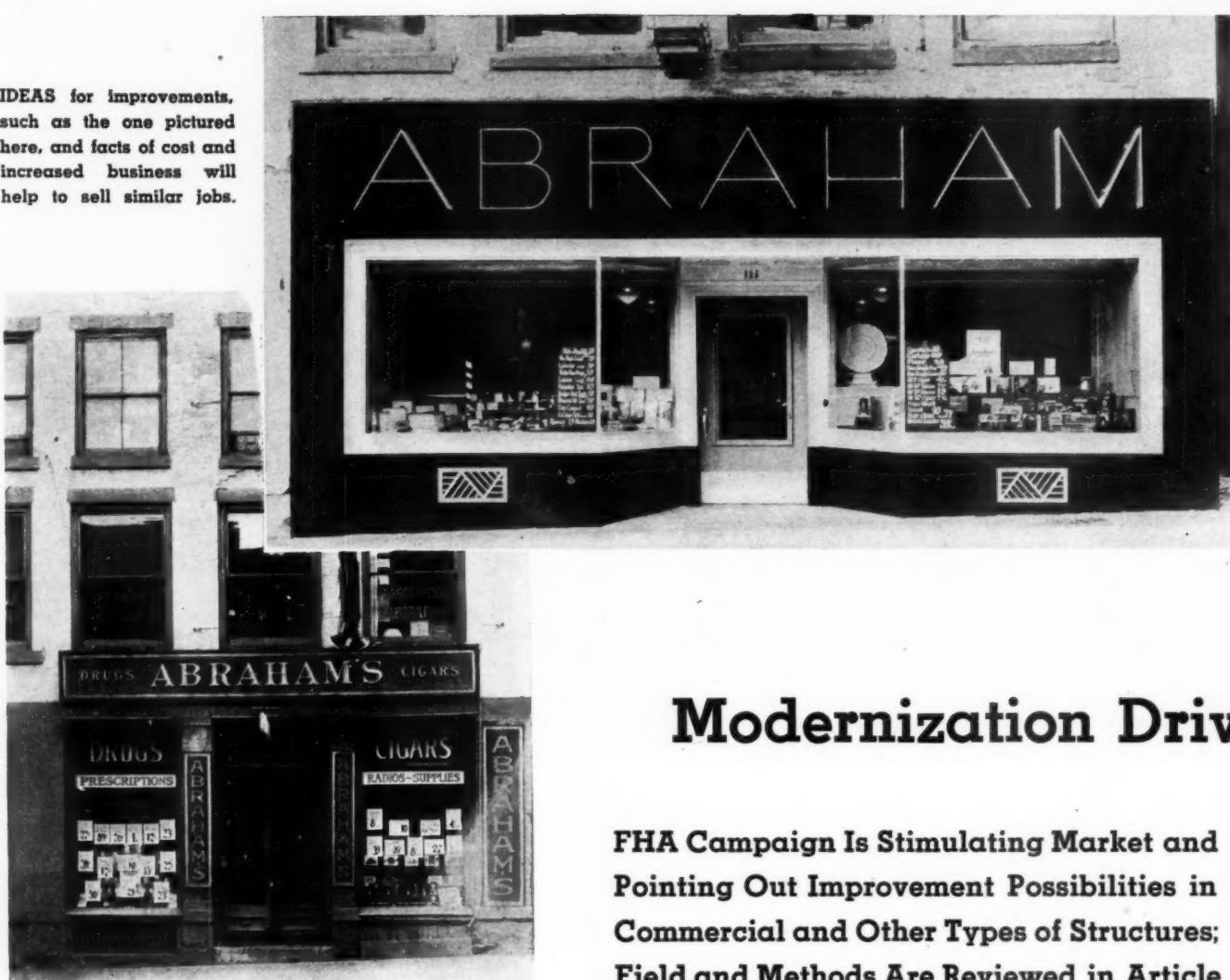
24' x 32' Highland Park Home with "Easy-to-Live In" Features



FLOOR PLANS and elevations of this little house show that Architect C. Storrs Barrows has done everything possible to make life easy for the home owners. The compact kitchen has a sliding panel opening into the dining alcove. The living room has a spacious air for a 24' x 32' house. Bedrooms are at rear away from noise and traffic. Bathroom is "insulated" by stairways. There is space upstairs for an additional room or two. In addition to all this, the house has charming architectural appeal and a most attractive porch and window detail.



IDEAS for improvements, such as the one pictured here, and facts of cost and increased business will help to sell similar jobs.



BUILDING contractors and building materials dealers need not be sold on the idea that modernization of stores or other commercial buildings pays big dividends. They are already sold. However, they need ideas and facts which will help them sell modernization to owners of stores and other properties.

One of the most potent facts which can be used by the contractor or dealer is that the FHA modernization plan makes property modernization possible to a large body of individuals, firms and companies who would have a hard time collecting sizable down payments or meeting the bills for such improvements over a short period.

The reader is probably familiar with the FHA modernization plan. But it will not hurt to review it here, in view of the fact that building contractors and dealers are leaders in the National Modernization Campaign, now under way.

The first step for anyone going into modernization in any volume is to talk it over with his financial institution and make definite arrangements for prompt financing. Institutions qualified to make Title I modernization loans have all the facts and forms in their possession and can explain all necessary details. Some dealers carry a supply of application blanks and fill them out for the lending institution—doing most of the preliminary work. Others take the applicant to the institution and let the loan officer do the questioning.

But the main thing is to arrange for quick action

Modernization Drive

FHA Campaign Is Stimulating Market and Pointing Out Improvement Possibilities in Commercial and Other Types of Structures; Field and Methods Are Reviewed in Article

either way, and to remember that the lending institution has final say, without consulting the FHA.

The more you know about the FHA plan, the more easily you can sell it to the prospective customer. For your convenience, here are some of the chief features concerning commercial properties (Class 1 and Class 2):

No loan for improvement of any one property can be for more than \$2,500, although any number of loans—up to the limit of the borrower's credit—for amounts up to \$2,500 can be made for improvement of as many separate properties.

The property must be owned by the borrower, or un-





THE run-down appearance of this grocery was not only radically improved by the changes made, but space was added as well with the projecting front. Before and after pictures at bottom of page suggest miracle-like transformation of a drab, old club into a modern building.



Is Under Way

der lease to him for a period running at least six months longer than the term of the loan.

The maximum term is three years and 32 days.

The over-all charge (including FHA insurance of $\frac{3}{4}$ of 1 per cent) cannot exceed the equivalent of \$5 discount per \$100 on a one-year monthly-payment note. The lending institution can make it as much lower than this maximum as it finds advisable.

Class 1 loans may be made for improvement of any type of existing property—repairs, remodeling, redecorating, modernizing or landscaping. They cannot be used to finance the cost of completing an unfinished structure, to purchase land, to pay for improvements undertaken before the loan was granted, nor to refinance existing uninsured obligations. They may, however, be used to repair buildings damaged by deterioration, fire, flood, tornado, or other calamity, provided a substantial portion of the original structure is left standing. Also they may be used to construct an attached building, or to change an existing structure from one type of building to another.

Class 2 loans are for building new structures not used

for residential purposes. Incidentally, when they are for agricultural purposes, the term may be 10 years instead of 3 years and 32 days—or for 15 years if secured by a first mortgage.

Class 3 loans are for building homes, or at least buildings used wholly or partly as residences, and must be secured by first mortgages running for a maximum of 15 years. The maximum amount is \$2,500 and the over-all charge cannot exceed the equivalent of \$3.50 discount per \$100 on a one-year, monthly-payment note, or $4\frac{1}{2}$ per cent interest plus 1 per cent service charge and $\frac{1}{2}$ of one per cent FHA mortgage insurance.

There is one thing which those dealing with FHA modernization loans must watch—eligibility of all the items involved in the deal. In determining such eligibility there is one safe rule to go by:

Practically anything built into the structure so as to become a permanent part of the real property is eligible, while an item which is detachable or easily removable is ineligible.

Among the major improvements eligible for FHA-insured loans are:

Repairs of all kinds, including carpentry, masonry, roofing, plastering, papering, electrical, heating, plumbing, etc.

Remodeling of all kinds, including putting up or taking down partitions, building additions, making rooms out of attic or basement space, building porches or converting one type of building into another type.

Redecorating floors, walls, ceilings, woodwork, etc.—but no detachable or removable furnishings.

Modernizing the plumbing, heating or wiring systems—or installing entirely new systems; building in cabinets, shelves and other conveniences; installing septic tanks, cesspools, wells, pumping equipment, etc.

Landscaping the grounds around the building, which may include grading, laying walks and drives, providing parking space, building fences, and planting. Landscaping or other improvement of vacant lots cannot be financed with Class 1 loans.



New Fireplaces Bring Increased Rentals

THE general attractiveness of a group of 26 small homes located on a well landscaped three-acre plot in Hollywood, Calif., can be judged by the two views at the left. Close inspection will show that new fireplace chimneys have been added to these houses, constituting a tremendous improvement in the individual units which cannot be fully appreciated on first glance.

Formerly these Hollywood Terrace homes had artificial fireplaces with gas grates for heat, as shown in the illustration at left below. It was decided that natural fireplaces which would be capable of delivering more heat would add both charm and utility. The buildings themselves, although erected some years ago, were well maintained and well worth the additional investment; the remodeling consisted of the following for each unit:

Removing old fireplace mantel and gas equipment.

Building brick chimney.

Constructing wood and split brick fireplace mantel along Colonial lines.

Installing Guardian drape brass screen, fire set, and irons, grate and Superior Fireplace circulator.

This work was done at an average cost of slightly over \$200 for each home.

Mrs. Helen Kirk, manager of Hollywood Terrace, is most enthusiastic because the owner saw fit to remodel both the interiors and the exteriors of these small homes. She is particularly appreciative of the added charm and greater livability afforded by the cozy comfort and efficiency of the open fireplaces with their heat circulating qualities. This remodeling has resulted in a marked improvement in securing new tenants at better rentals as well as retaining old tenants who appreciate the pleasing effect produced. As to rental, the management states that units ordinarily renting from \$75 to \$150 (unfurnished and furnished respectively) are now commanding an increased rental of 10 per cent.

E. A. Wickholm, fireplace contractor of Los Angeles, installed these Superior Fireplace heat circulators, and the remodeling was done under direction of A. D. Hoppe.

These units can be used for complete or supplementary heating purposes in all climates, and the experience re-



TWO VIEWS of Hollywood Terrace homes; note new fireplace chimneys.

lated above will undoubtedly suggest similar possibilities in many other communities. They provide year-round supplemental heat and better ventilation by circulating warm air on the same principle as a hot air furnace. The cool air is taken into the heat circulator heating chamber through floor level intakes on each side of the fireplace and circulated out into the room through the warm air ornamental outlet grille over the fireplace.



THE cold, austere appearance at left was changed to the cheery, efficient heating type fireplace at right in group home remodelling.



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New Display Ideas for Real Estate Office



THE striking store front, as shown at the top of the page, features Vitrolite, large glass areas, modern neon lighting, terrazzo floor and walnut paneled cases.

THE floor plan and longitudinal section at the right indicate how the sawtooth display was worked out along the sidewalls, and desk space is arranged in center of floor.

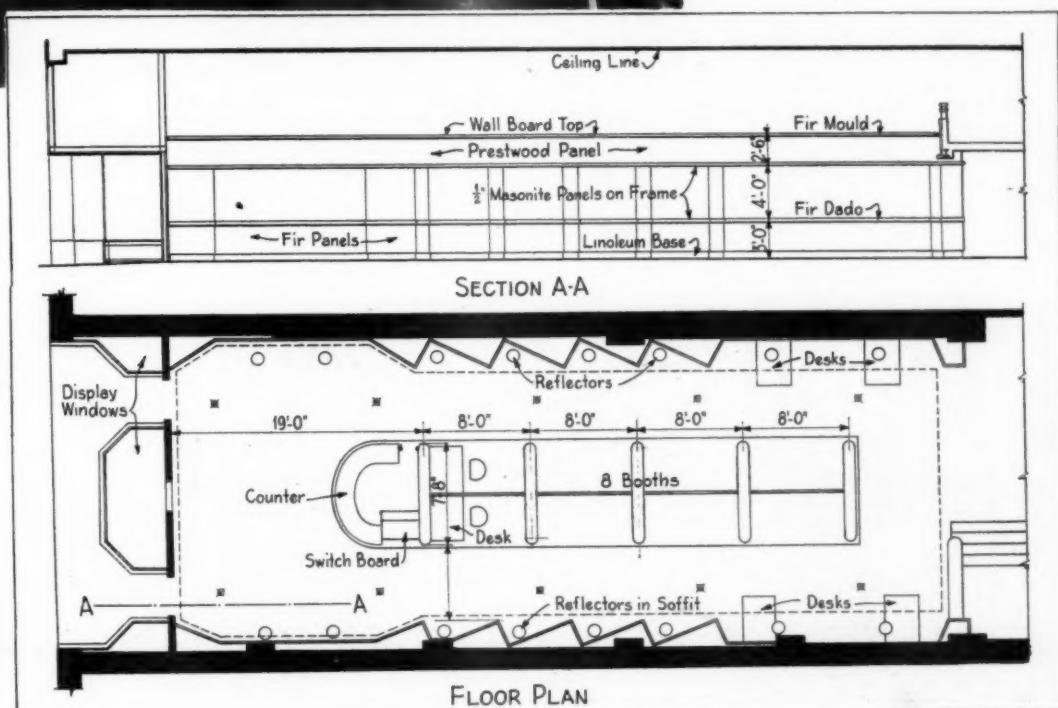
SINCE its completion, the office of the Puget Mill Company, Seattle, Wash., realtors, has attracted attention as an ideal type of arrangement for this branch of the building industry and provides a number of new ideas. Both the exterior, designed by McClelland & Jones, architects, and the interior, designed by Architect Henry Fey, are quite striking and provide maximum display. The front has a clever G-E neon sign mounted directly on L-O-F cream colored Vitrolite facing over the two entrances and display cases.

White neon lights are carried across at the entrance ceiling line. The bulkhead is faced with black Vitrolite, and there is a terrazzo floor. Small auxiliary display cases fill the end wall spaces; the plate glass is set in

L-O-F alumilite mouldings. Window backgrounds are paneled in walnut. The interior has cleverly arranged continuous sawtooth display panels along both sides for various property and building exhibits. The lighting of these panels is done with an indirect fluorescent system. An oval receptionist desk occupies the front center position, back of which there are eight open booths for salesmen's desk space. At the rear, the executive offices are located on a glass enclosed balcony which overlooks the main floor.

J. H. Wilson Company was the building contractor.

LEFT: The walls of this Puget Mill Company Seattle office are arranged for improved real estate display.



Redmont Gardens in Birmingham Follow Latest Type Planning

ONE of the first garden type apartment house projects erected in the deep South is that of Redmont Gardens, a \$1,250,000 development in Birmingham, Ala. The four buildings containing 200 apartment units are located in an exclusive section of the city on eight acres of land. Sixty per cent of the land is landscaped with gardens, lawns and walks.

This is of course not to be confused as a slum clearance or government housing project; it is a suburban-type, limited dividend rental housing project, financed by private capital, with insured first mortgage under Section 207 of the National Housing Act.

Architecture follows the Williamsburg Early American Colonial design, which harmonizes with the surrounding residential environs and is distinguished by gabled Colonial tiled roofs, Colonial entrances of simplicity and dignity, Colonial balustrades, etc.

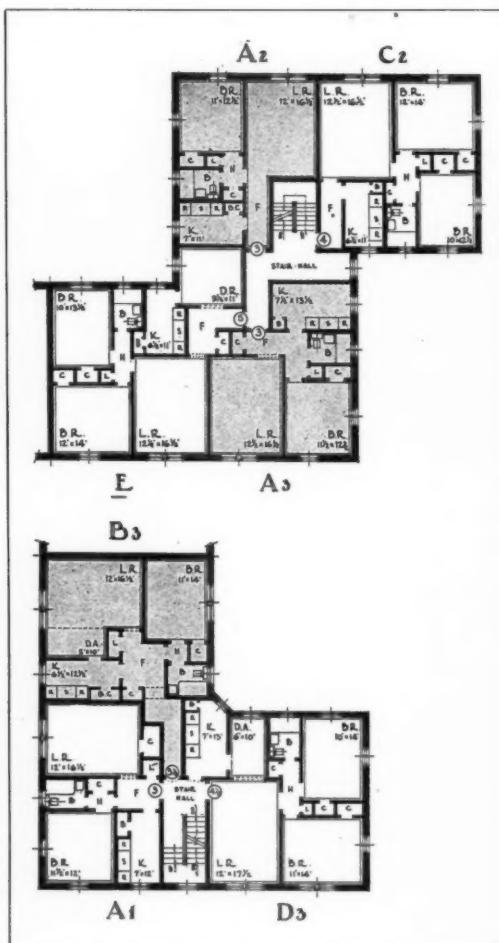
Details of construction, illustrative of the quality of the development, include 9-inch brick walls furred, hollow-tile and concrete floors with Bruce hardwood block floors laid in mastic on the concrete, tile roofs (where slanting



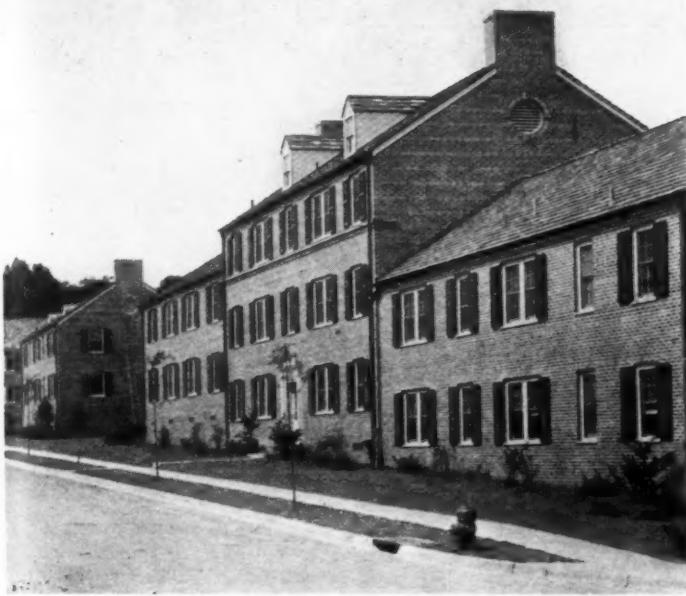
roofs are provided), slag flat roofs, weatherstripped windows and doors, copper full length screens, tiled baths with shower, and built-in radio aerials. Attics are insulated with glass wool.

Among the 200 apartment units of the one and two-bedroom type are to be found 11 different floor plans, offering one to suit most any taste. The rental price

BELOW at left, an entrance and a rear play yard view at Redmont Gardens;



LEFT: Looking up one of the streets of the Redmont Gardens, one of the outstanding garden type multi-family developments in the South.



ranges from \$45 to \$72.50. One-bedroom apartments range in price from \$45 to \$56.25. Most apartments have foyers which add space and permit entrance to every room without going through any other room. Closets are numerous and large, no apartment having less than four, many having five commodious closets with ample shelving. All baths are accessible from the living

below and to right, typical units and plot plan of this Birmingham project.

room without passing through a bedroom.

Appointments of the apartments are in character with the construction and design. Each apartment has an electric range, an electric refrigerator, Venetian blinds, radio aerial and radio ground installed, storage space in the basement and access in the basement to laundry rooms which are equipped with double-tubs and metered washing machines and driers for use of tenants.

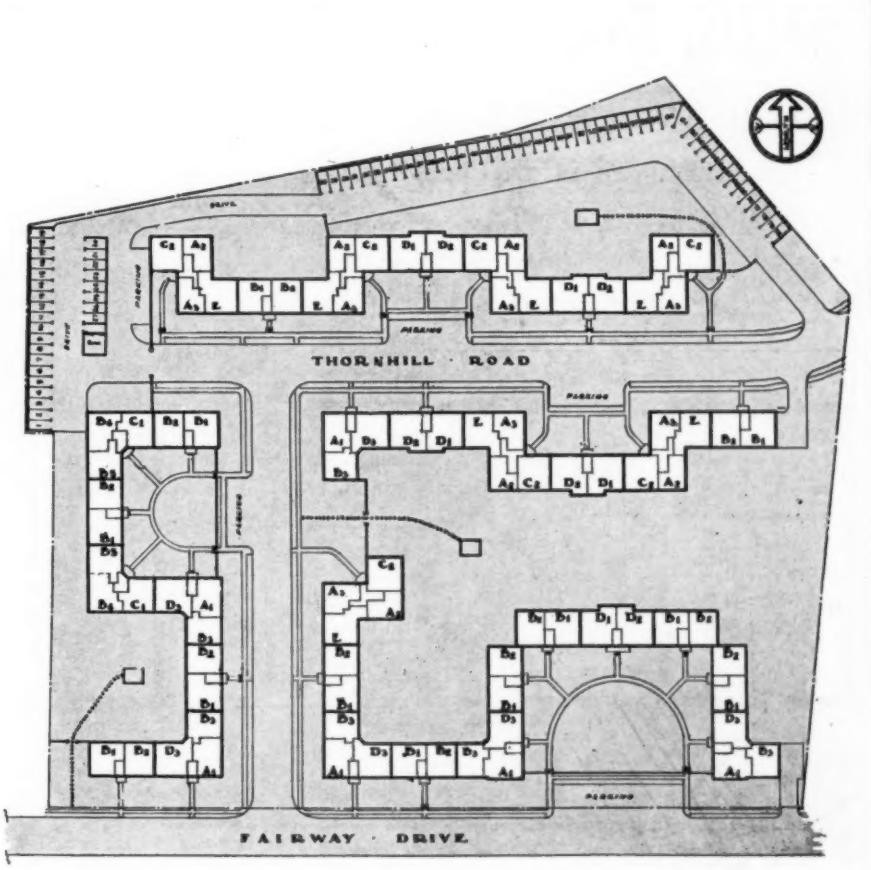
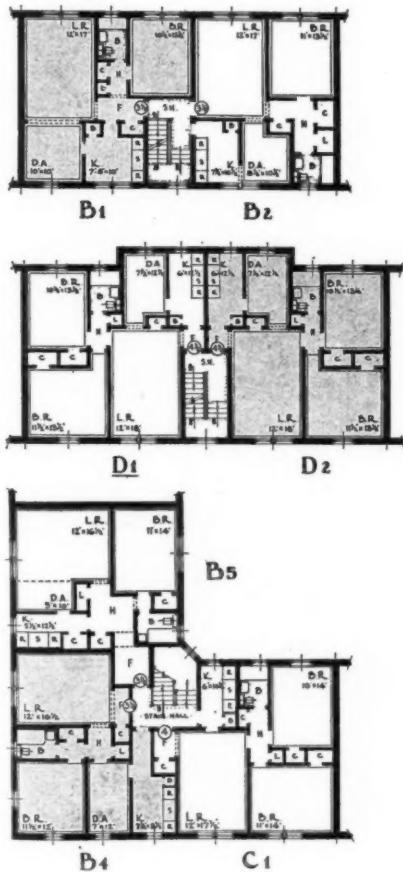
For best results in showing, several apartments in the project were furnished by a local store. Being attractive, these units usually rented first, and in a few cases the furniture was bought by the tenant.

Particular attention was given to the landscaping of the area. Trees were saved where possible and top soil removed from the building areas for use elsewhere on the plot. Some 3,000 pieces of shrubbery, also additional trees, were planted. Play equipment was provided, including swings and sand boxes.

Streets in the development are amply wide with recessed portions for angle parking. In addition, a number of brick garages with metal partitions and Overhead doors were built in the rear with paved approaches.

Steam heating is provided by means of two coal-stoker-fired steel boilers, each one serving two buildings. Hot water is served by the same means. The heating is thoroughly automatic, being controlled by the outside temperature. All hot and cold water pipes are either copper or galvanized wrought iron. The heating system is of the two-pipe vapor low-pressure type.

Redmont Gardens were built and are owned by B. L. Jackson, Inc., of Washington, D.C., being financed by a loan from New York Life Insurance Company.





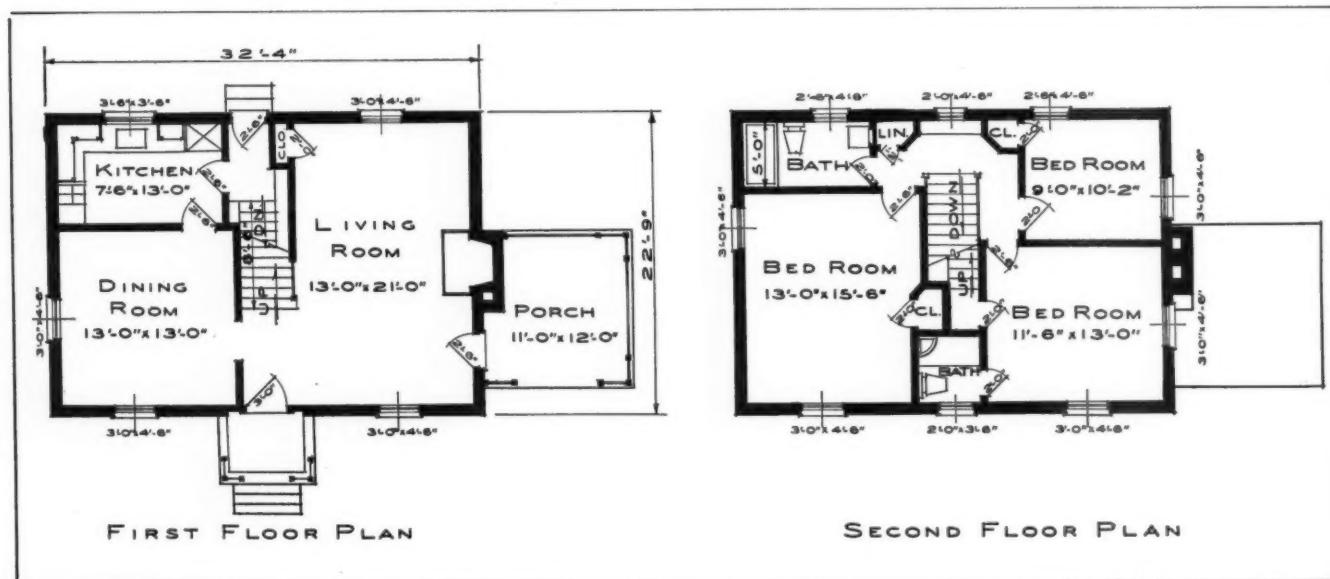
HAND-WROUGHT IRON WORK on front entrance gives unusual charm to this Matt. P. Will home in Glenburnie community at Richmond, Virginia.

Will Builds Well

**Matt. P. Will of Richmond, Va.,
Gives Buyers High Quality in
Authoritative Brick Homes.**

WHEN your *American Builder* reporter passed through Matt. P. Will's Glenburnie home community in Richmond, Va., he found much to praise. For here was a builder who was not only building substantially and well, but was making every effort to retain the natural beauty of the surroundings and to erect houses that carried on the fine old tradition of the Colonial architecture of the section.

The two houses illustrated above were designed for



SIX SPACIOUS ROOMS and two baths are included in this well laid out 32'4" x 22'9" plan. Note closet and window seat details.



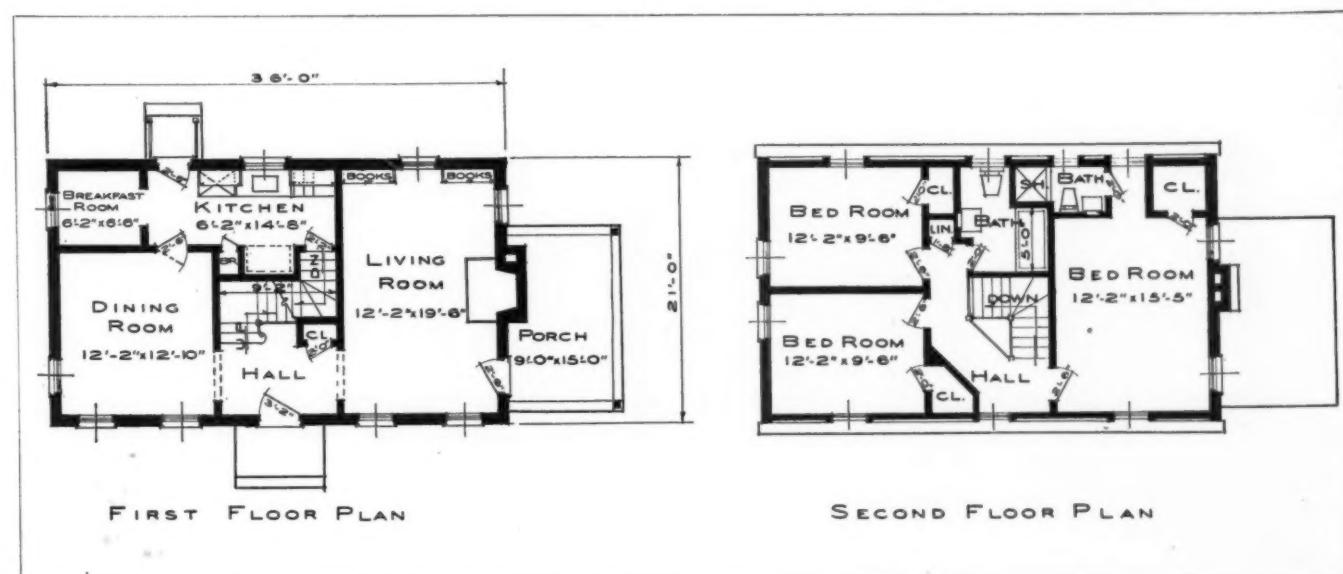
TYPICAL VIRGINIA STYLE of Colonial times is beautifully carried out in this Glenburnie home, built by Matt. P. Will. Andrew Kidwell, architect.

Mr. Will by Architect Andrew L. Kidwell and are of substantial brick construction, with slate roofs, copper flashing, concrete porches and well-thought-out floor plans. Matt. P. Will has had long experience in the building business in Richmond and has used that experience to good effect in planning and constructing houses that meet the requirements of the people in his area.

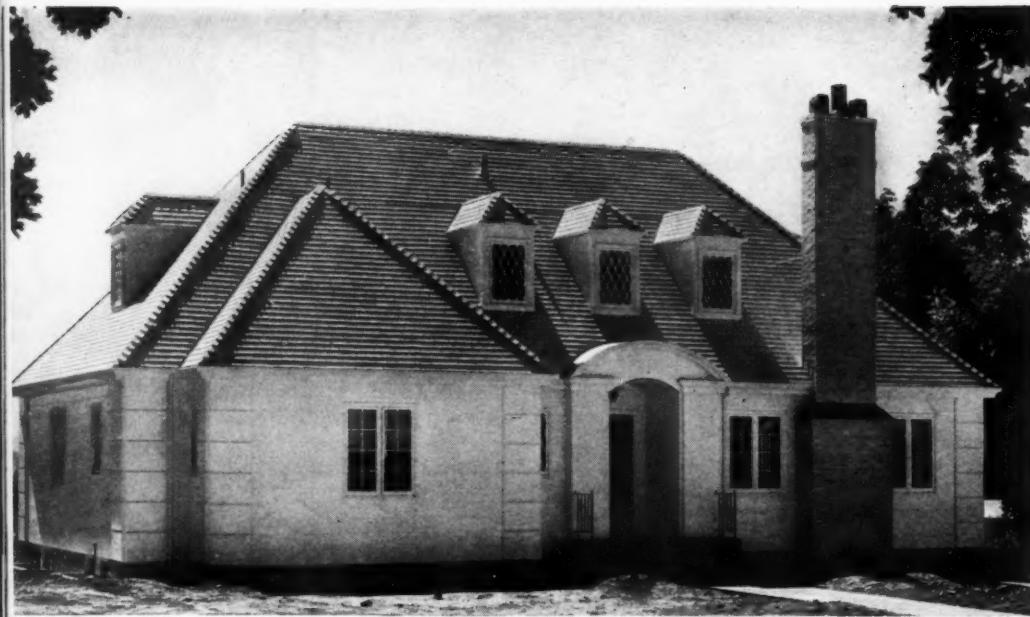
In the house at left the traditional square Virginia brick house has been enlivened by the wrought-iron front en-

trance detail and by the unusually attractive porch railing and trim. There are six well-proportioned rooms and two baths in the 32' 4" x 22' 9" house.

One of the finest recent examples of the work of Will and Kidwell is the long, narrow, traditional Virginia Colonial home above. This has a spacious center hall with a fine Colonial stairway. The two baths upstairs are conveniently located as well as being economically placed back to back.



LONG AND NARROW in traditional Virginia center-hall style is this 36' x 21' plan. The two baths are economically grouped.



LEFT: The nine-room and garage home shown as it neared completion, was designed by C. H. Freeman, architect, Portland, Ore., and features the special use of insulation board.

Oregon Lumberman Builds His Own Home

CONTRACTORS have learned to expect something special when a lumberman builds a home. The builder of the W. W. McCready residence in Forest Grove, Oregon, was not disappointed. Mr. McCready is associated with the W. J. McCready Lumber Company, operator of a large string of lumber yards in the northwest. C. H. Freeman of Portland was the architect.

A noteworthy feature is the double-barreled insulation job, both on interior and exterior walls. Exterior side walls and pitched roof areas were covered with asphalt-coated Fir-Tex sheathing. On the interior,

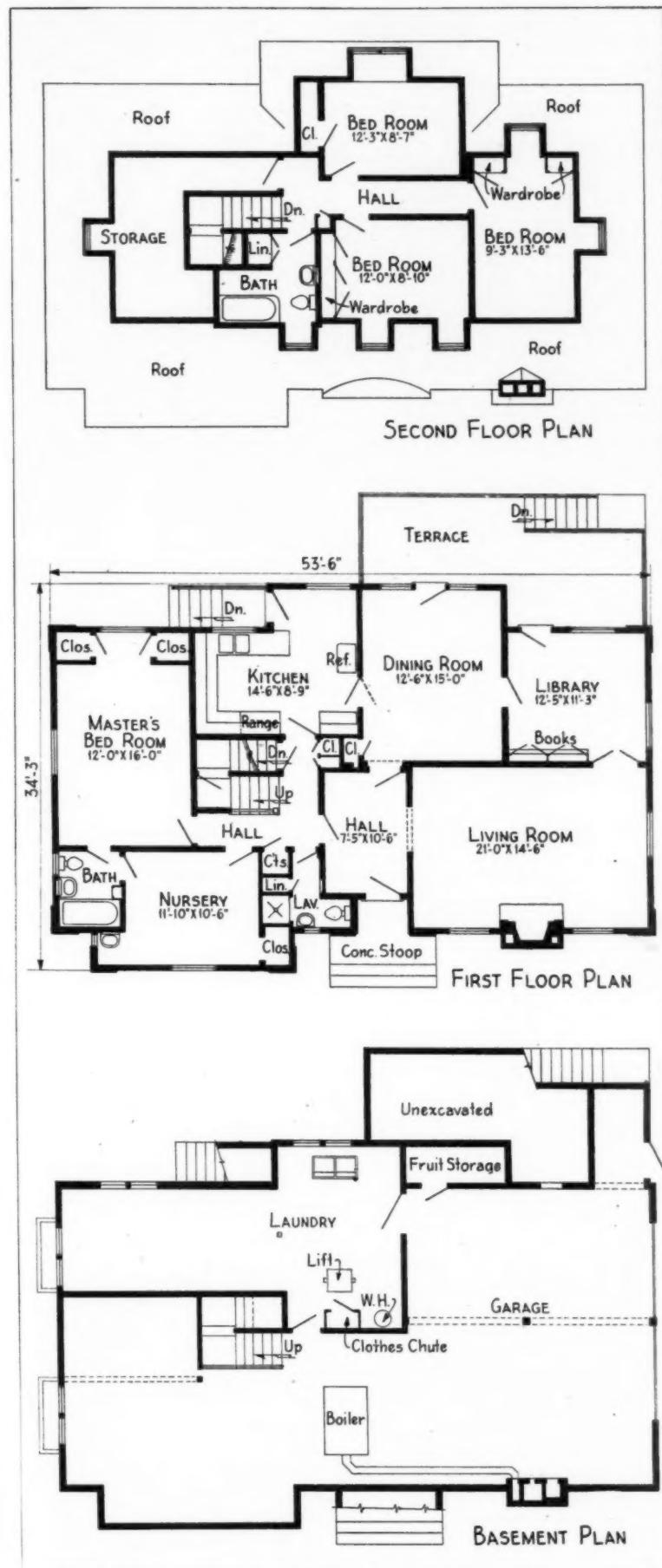
plaster on walls and ceilings was applied on Fir-Tex plaster base insulating lath.

For flooring, Mr. McCready brought in white pecan from the south. Siding is 1 x 10 vertical grain hemlock tongue and groove. Philippine mahogany trim is used in the living rooms. One-half inch butt vertical grain cedar shingles are used over roof sheathing laid as shown below. The surface is sealed and painted with aluminum paint. Approximately a ton of steel was used in reinforcing of the construction of the house.

Other material and equipment used are Trane air conditioning, Pabco paint and General Electric refrigerator.



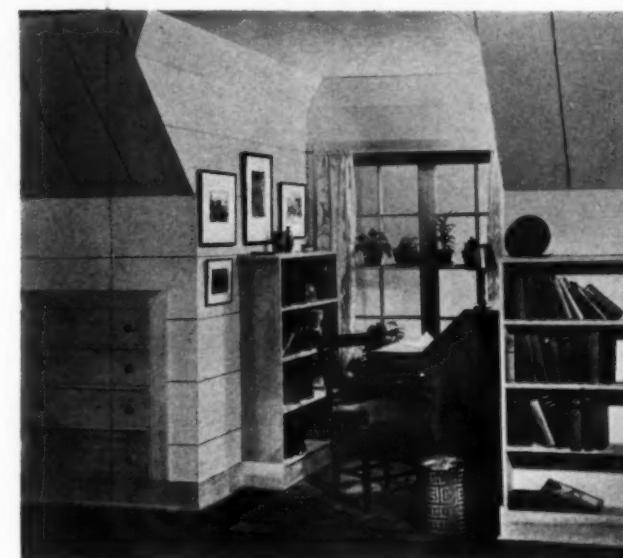
THIS construction view shows how roofers were laid over insulation board to take the red cedar shingles. Fir-Tex board was also used under T & G siding and as plaster base.



THE floor plans of this Oregon home reveal that there is much more well arranged floor area in it than a casual glance at the exterior, opposite, would indicate. There is a two-car garage, recreation, storage and laundry space in basement, 6 rooms, 1½ baths on first floor, and 3 bedrooms, bath on second.



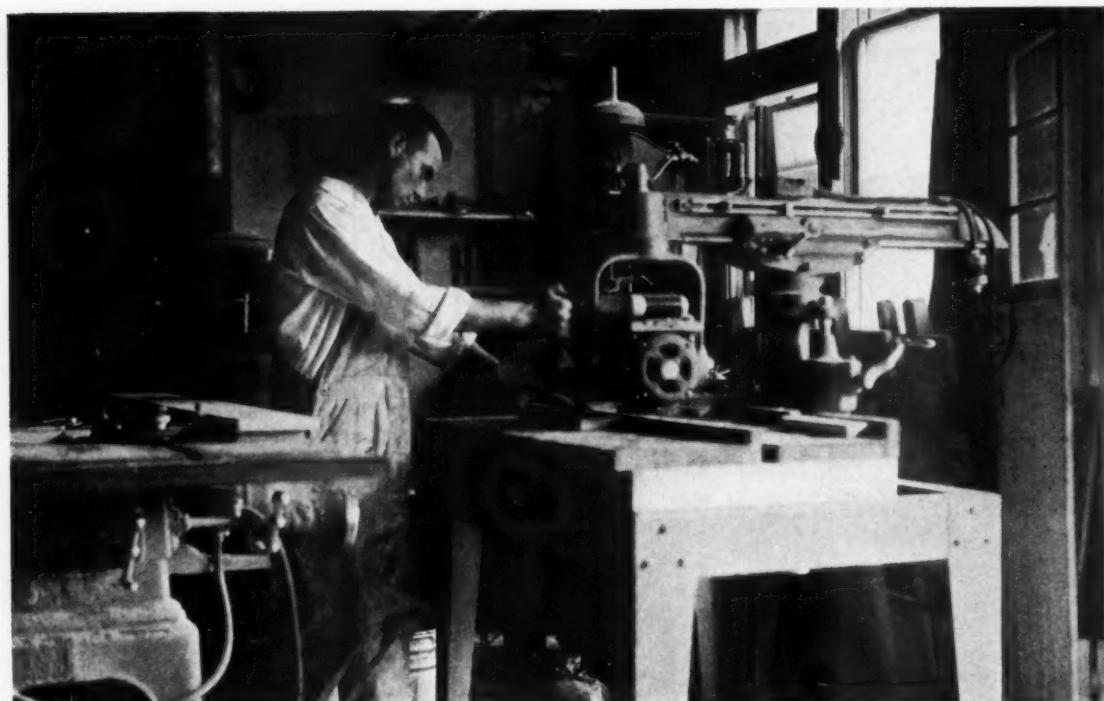
BASEMENT game room above has tinted Fir-Tex walls.



INSULATION plank as interesting attic bedroom walls.



THE McCready home was sealed inside and out with insulation board for sheathing and plaster base, the latter applied as shown in the above view. The home has an air conditioning system.

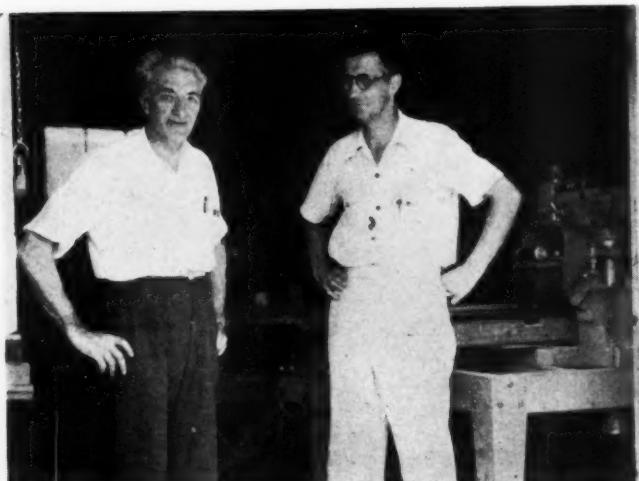


POWERFUL new type radial saw is used in both shop and out on the job.

\$265 SAWED Off House Cost



FAST HAND SANDER gives nice finish to shop-built cabinet work.



FRANK WILLIAMS and **W. M. Strother** at workshop.

How Bill Strother of Mattawan, N. J., uses power equipment on houses, bars, mill-work. Has "all the work he can handle"

MANUFACTURERS of power equipment have been reporting sharp increases in the sales of their new and improved products to builders, indicating that increased building volume is having a definite effect on building methods.

The effect of rising labor costs and demand for speed in construction is to increase the use of new and improved electric saws and other power equipment. An outstanding illustration of this is William M. Strother, carpenter and general contractor of Mattawan, N. J. When interviewed by *American Builder* recently, the fact came out that his problem was one of *production* at a lower cost rather than sales, for he had all the work he could handle for the balance of the year.

Strother maintains a well-equipped shop, with power equipment that does a great deal to enable him to produce a better house faster and at a lower cost. One of the recent items of equipment installed by him was a Walker-Turner radial saw. This piece of modern builder's equipment is equally adaptable for use in the shop or out on the job, and Strother makes use of it in both places. The point of this story is the construction of an attractive \$15,000 house, illustrated on the opposite page. On this job Strother set up his radial saw right at the site and did all the cutting involved. He also used an electric hand saw for incidental cutting. Strother's actual report on this job is as follows:

"In keeping a record, we find the following:



ATTRACTIVE New Jersey home built by Strother, on which cost records showed saving of \$265 by using one radial saw and one electric handsaw.

House estimated at \$15,000.00
 Carpenter labor at 1,500.00

"Girder lines very much broken with total of 10 independent girder frames set flush, with all beams squared and notched. All bridging, framing, studs, 2nd floor beams, roof rafters and gables were cut with 1 mechanic and 2 helpers, the foreman making the layout, and the only other power tool was a small portable Skil-saw for sheathing cuts.

"There were 15,000 ft. of framing material used, and estimated time was:

5 days, 5 carpenters, @ \$8 per day \$200.00
 Carpenter helpers, 6 days @ \$4 per day 120.00

..... \$320.00

"Our actual time spent was 2 days for 1 man cutting, 2 helpers, layout by foreman part time:

Carpenter on saw	\$ 16.00
Helper	16.00
Foreman	17.00

Estimate	\$ 49.00
Actual	\$320.00
	49.00

Power bill for equipment operation	\$271.00
	6.47

	\$264.53

(Continued to page 94)



EVERYTHING but the bottles was turned out in Strother's workshop.
 Power equipment proves a valuable factor in commercial work



EXAMPLE of fine cabinet work turned out with power equipment in Strother's own shop.

Portfolio of Architectural Plates of DOUGLAS FIR PLYWOOD PANELING

PREPARED BY CARL F. GOULD, F.A.I.A.

Another of a series, intended as suggestions to the builder and architect as possible ways of using Douglas Fir Plywood for the finish of a high ceiled room and balcony

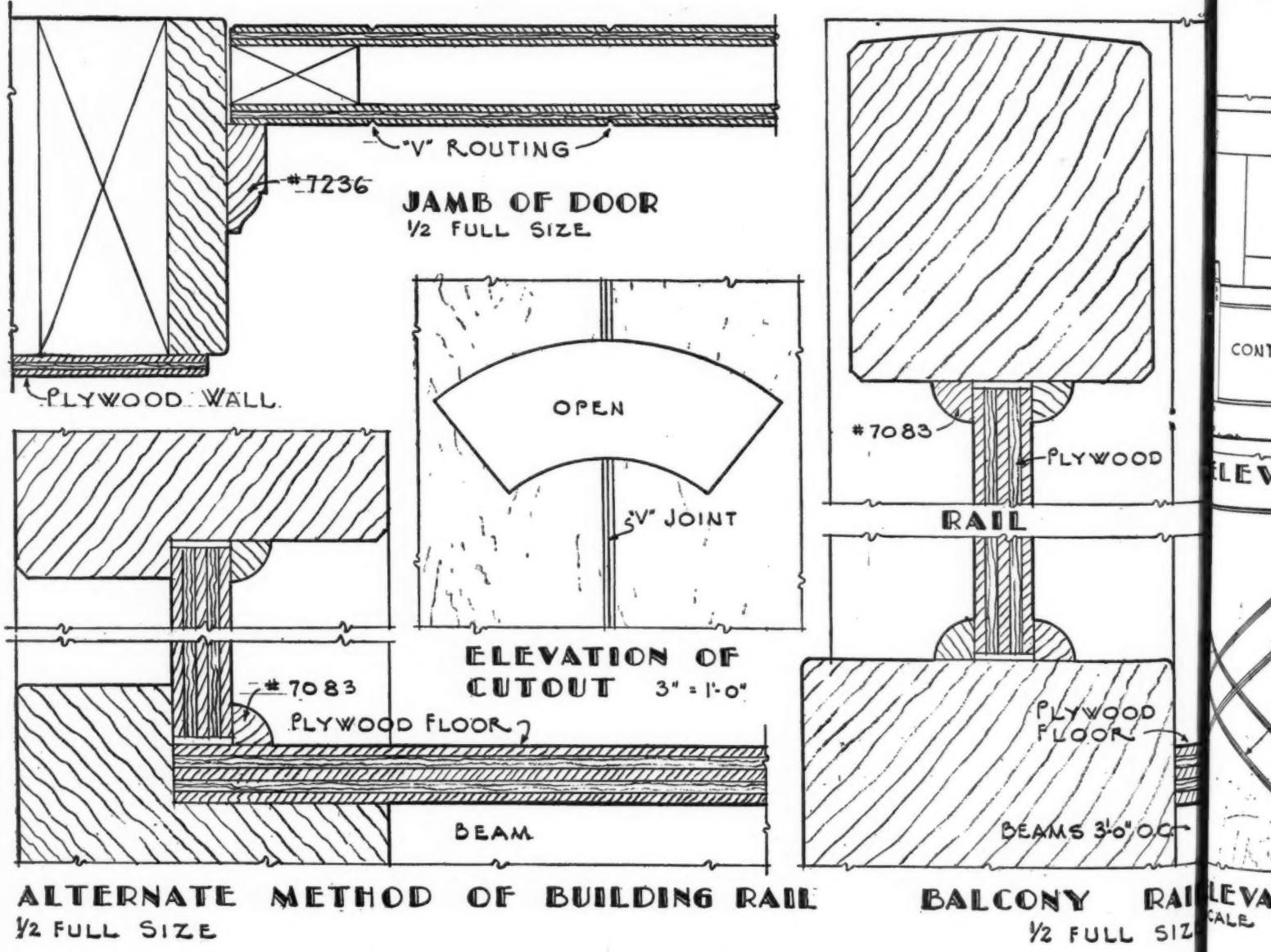
ON these pages is illustrated a rustic or camp type of treatment for a high ceiled room with a balcony at one end. The walls are covered with Douglas fir plywood in random sizes, with flush joints. A wide fascia board replaces the conventional cornice. Various types of band-sawed treatment for the balcony railing are shown. Five-eighth inch Douglas fir plywood is shown for the floor of the balcony. The room ceiling is covered with large squares of plywood, with joints covered with wide flat battens. Walls and ceilings of this room would be effectively treated with

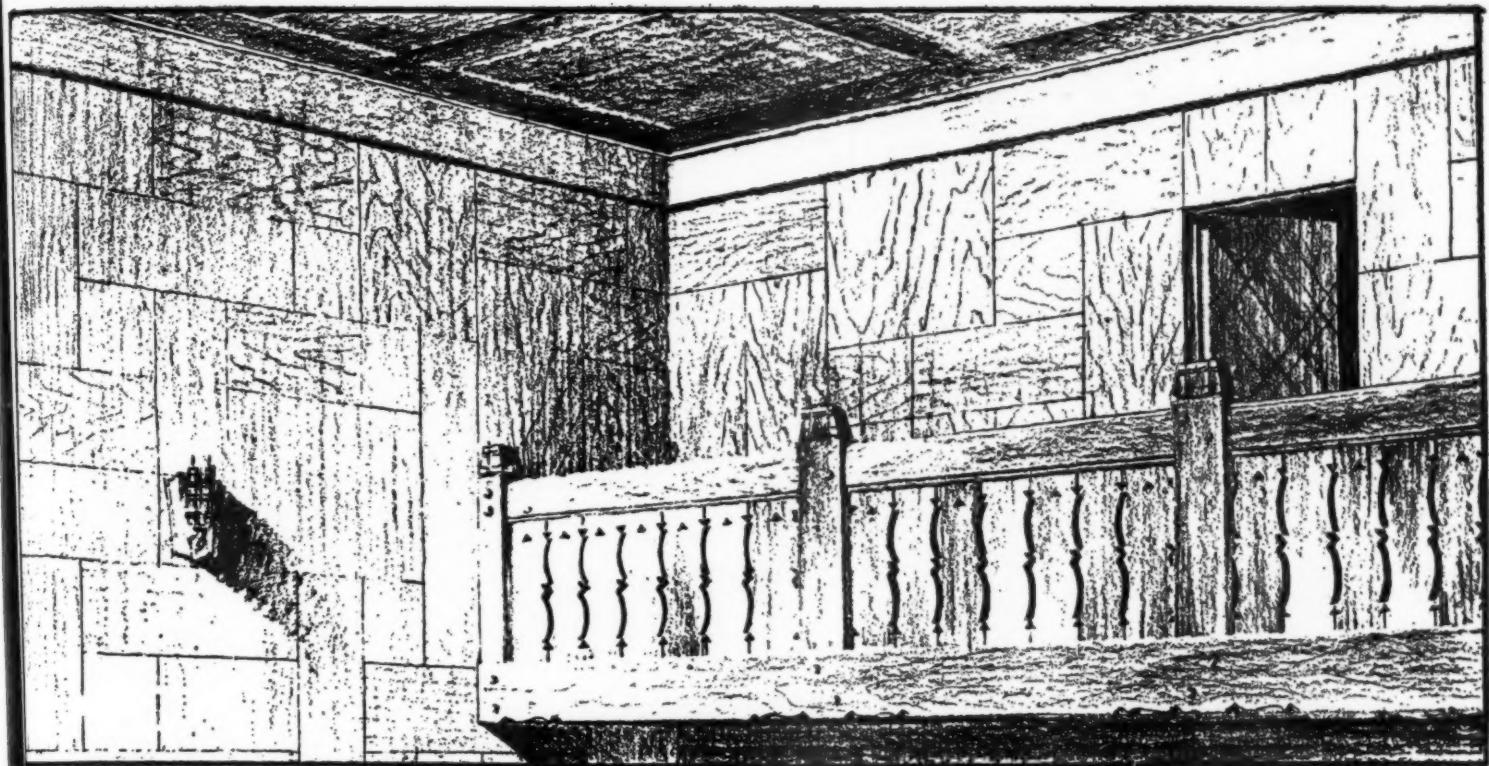
oil stain, to which a small amount of pigment might be added for a slightly clouded effect.

MATERIALS: Walls and ceiling panels are of $\frac{1}{4}$ " wall-board grade of Douglas fir plywood, secured with 4d finishing or casing nails. Nailing strips may be let in to the face of studs at proper intervals or the frame may be covered with $\frac{5}{16}$ " sheathing grade of plywood as a solid base for the paneling. In this case, by applying the sheathing with 6d nails 6" on centers at edges and 12" elsewhere, it would furnish all necessary bracing.

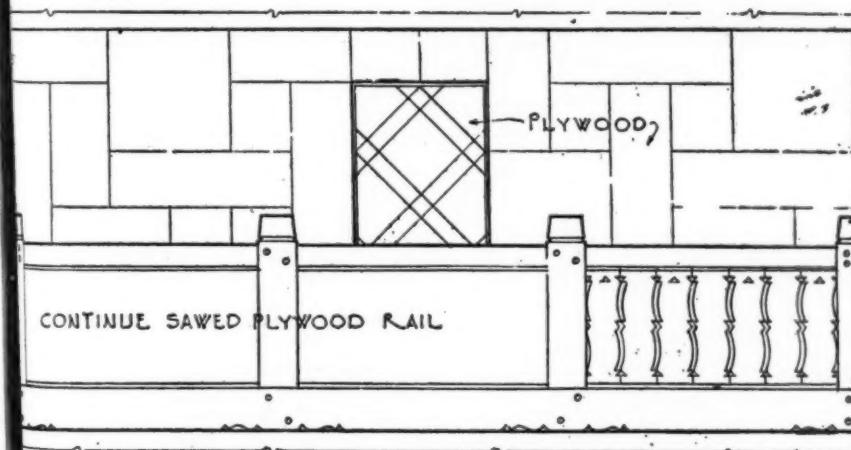
DETAILS

$\frac{1}{2}$ FULL SIZE AND 3' - 1'-0"

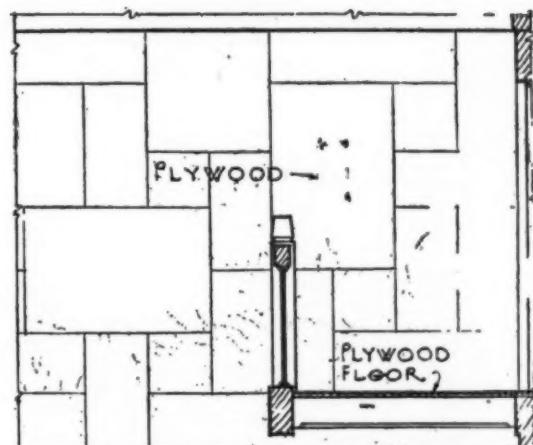




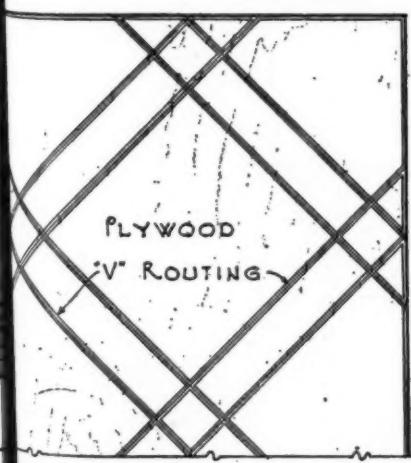
RANDOM PANELLING



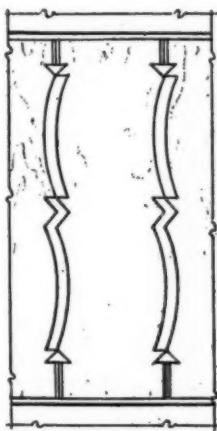
ELEVATION OF BALCONY SCALE $\frac{1}{4}'' = 1\text{-}0''$



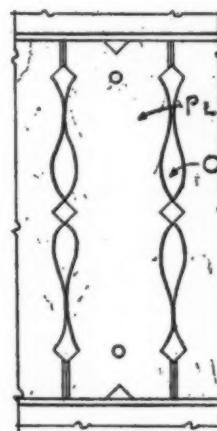
SECTION THROUGH BALCONY SCALE $\frac{1}{4}'' = 1\text{-}0''$



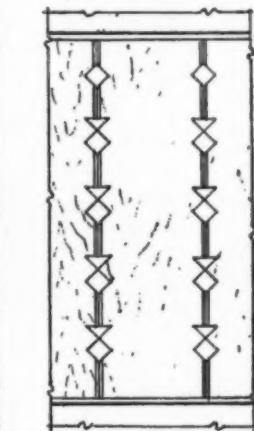
ELEVATION OF DOOR SCALE $\frac{3}{4}'' = 1\text{-}0''$



SUGGESTED TREATMENT FOR



PLYWOOD
OPEN



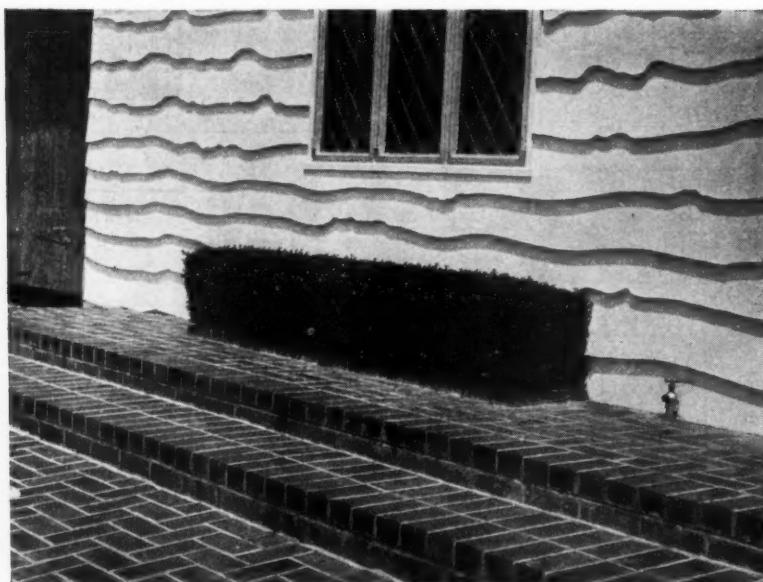
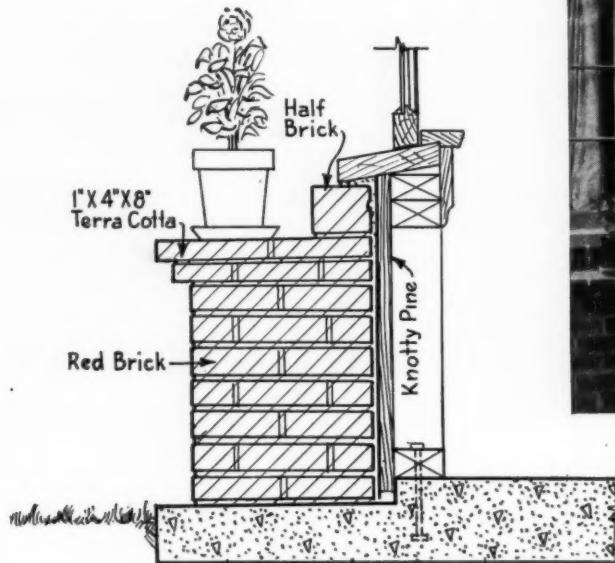
BALCONY
SCALE $\frac{3}{4}'' = 1\text{-}0''$

SHOPCRAFTER'S Corner

Things To Build for Profit or Pleasure

Stepped Window Ledge and Terrace in Brick

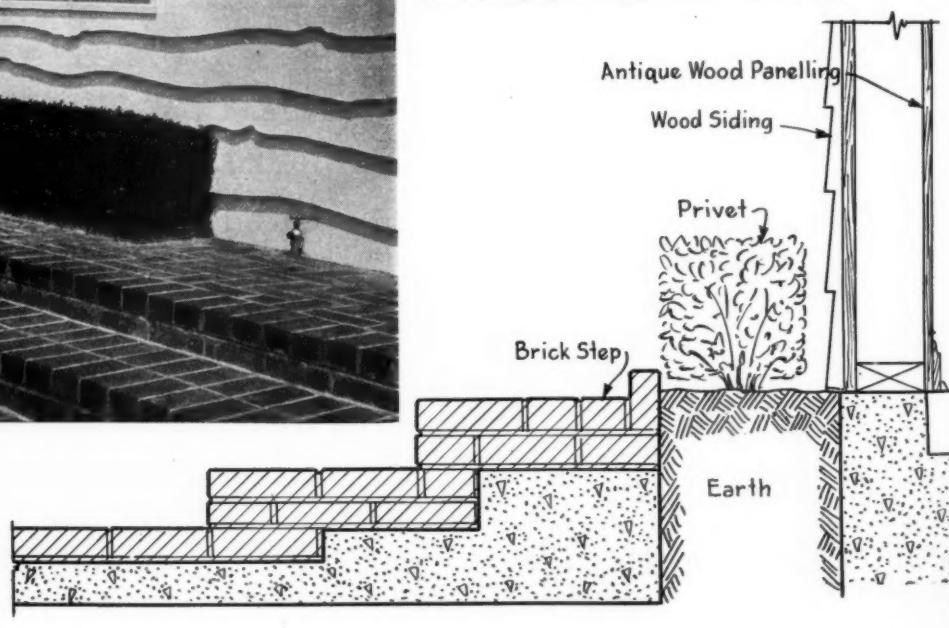
THE extended window ledge idea, as shown at the right, and detailed below, comes from California; flower pots and substantial base add charm and dignity.



THE stepped terrace above enclosing under-window hedge provides a novel and decorative approach.

FROM California come these two clever ideas which add much to a frame cottage of this type by lending a substantial feeling, and at the same time introducing a colorful point of interest. The adaptability of such treatments is wide because they can be applied to dressing up existing homes as well as being included among features of new construction.

The details indicate the simplicity of construction. A good base will assure against settling; in colder climates, footings to frost line for the flower ledge will prevent heaving. The siding treatments and other details will suggest possibilities for modernization jobs, bringing them up to date.—Hi Sibley.





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Ten years ago construction features were the main arguments used in selling new houses. Mr. America knew good construction (or thought he did) and a well-built house was all he asked.

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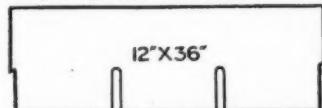
GENERAL  ELECTRIC

SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on page 72 for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to manufacturers at addresses given, mentioning your profession, occupation or business connection with building industry.

WHAT'S NEW IN BUILDING MATERIALS

AB217 A new extra heavy three tab strip shingle, the "Magnatab," is offered by Barber Asphalt Corp., Barber, N.J. It is constructed with a heavier butt which not only gives extra protection, but also provides an attractive shadow design on the finished roof. The extra thick coatings of asphalt and colorful mineral granules on the tabs tend to give a tapering appearance to each shingle.



New Barber Genasco Magnatab Shingle.

It comes in striking new color blends such as green tweed and red tweed, as well as eye appealing solid colors, blue and mahogany. This roof of character has a 5 inch exposure and a 2 inch head lap. It can be laid over old roofs with assured success and is immensely popular as a specification shingle for new construction.

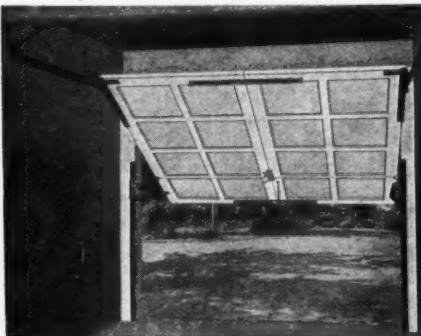
AB218 Enhanced appearance and increased weather and fire resistance are the announced objectives of recent developments in the Ruberoid Co. (New York City) line of square tab asphalt



Butt Reinforcement in Ruberoid Shingles.

shingles known as "Thick Butts." The exposed part of the shingle has two additional layers of the coating which seals in the asphalt saturant, and also two layers of the mineral surfacing. The result of this extra thickness of the butts, the manufacturers say, is both increased protection where it is most needed and improved appearance due to the deeper shadow lines. The extra mineral coating substantially increases fire resistance. The shingles have an interesting wood-grain texture and are obtainable in a number of soft colorings.

AB219 Farley & Loetscher Mfg. Co., Dubuque, Ia., has recently placed on the market a new garage door called "Uni-Rol." It is extremely well balanced, and easily adjusted so that the operations of opening require merely a slight push on the bottom to swing it automatically to a full open position without any further effort. The counter-



"Uni-Rol," F. & L.'s New Garage Door.

balancing springs are so easily accessible that any adjustment can be made very quickly. The door is constructed of heavier parts than most doors in the lower priced field.

AB220 Sanitas Fabric Wall Covering, developed by Standard Coated Products Corp., New York City, won its national consumer reputation for washability and wearability in a million kitchens and bathrooms. But this year, this long established favorite steps out in style. Now there are appropriate Sanitas designs



Sanitas Wall Coverings in New Patterns.

and colorings for all rooms. Sanitas is available in 16 decorator-styled plain colors —simulating the appearance of the perfect paint job. Sanitas plain colors are 4 coats of paint, machine-applied on a fabric foundation.

AB221 Extruded aluminum alloy metal trim is most beautifully presented in the 1940 catalog (No. 104) of the Wilson Metal Products Co., Columbus, O. This is a brochure of 24 pages smartly illustrated in aluminum, solid colors and black. Nosings with linoleum inserts for counters, tables, sink drainboards and wainscot caps—the latest thing in smart decoration—are included.

AB222 A "Maintenance Painting Handbook" has been compiled by American Marietta Co., 43 E. Ohio St., Chicago. It presents the findings of more than 20,000 actual analyses of painting problems and is a pocket size handbook of 120 pages. How to paint special surfaces such as brick, concrete, metals, felt, tar paper, linoleum, glass and slate is explained.

AB223 "Preservation with No-D-K Natural Wood Creosote" is an illustrated handbook of 16 pages and covers prepared by the Tennessee Eastman Corp., Kingsport, Tenn. It discusses termite control and lumber treatment to prevent decay.

AB224 "A Glimpse of an Interesting Modern Home" in which floors of maple make a special contribution to unique interior effect, is the title of a striking 8 page folder prepared by the Maple Flooring Manufacturers Assn., McCormick Bldg., Chicago. Large photographs illustrate numerous interiors in this modern home and directions are included as to how to lay and how to finish maple floors.

AB225 The new Shelby catalog, No. 38, from The Shelby Spring Hinge Co., Shelby, O., is a spirally bound portfolio of some 200 pages. The complete Shelby line is illustrated and numerous architectural details are included showing recommended construction methods.

AB226 "Tip Top Float Over" garage door equipment featuring the new No. 760 line is offered in a neat folder from Western Products, Inc., New Castle, Ind. This hardware is adaptable for modernizing old doors as well as when building new.

AB227 "Modex, The Modern Casein Paint in Concentrated Powder Form" is the subject of a new 4 page data sheet from The Reardon Co., St. Louis. It shows the advantages of Modex for walls and for ceilings and specifies the proper method of application.

Readers Service Department Continued to Page 68

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 72

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Join the big family of International owners next time you buy trucks—and enjoy the *performance* and *economy* these units will give you over a long period of years.

There's real satisfaction hauling your loads with Internationals. That's because this organization *knows how* to build trucks for the men with loads to haul—trucks that are *all-truck* all the way through, readily adapted to all types of loads and conditions.

Depend on Internationals for outstanding service at lowest possible cost. Find out all about the types and sizes best suited for your work. The nearby International Dealer or Company Branch will give you complete information. Sizes from Half-Ton units up to powerful Six-Wheelers.

INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue Chicago, Illinois



S. W. Bomberger, mason and plastering contractor, Naperville, Ill., finds this International Half-Ton Truck with pickup body a handy unit in his work.

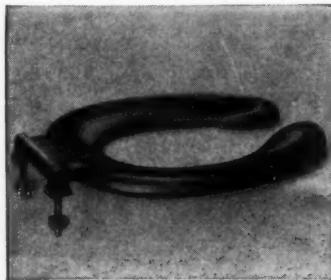
INTERNATIONAL TRUCKS

SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on page 72 for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.

EQUIPMENT ITEMS FOR MODERN BUILDINGS

AB228 Moulded in one seamless piece from vulcanized hard rubber, the new "Stasco" Ebonite seat of the Standard Tank and Seat Co., Camden, N.J., cannot be worn out, despite the usual



The New "Stasco" Ebonite Seat.

rough treatment that public toilet seats get. There is no "separate surface" to wear off. It is solid hard rubber throughout. This new Ebonite seat is also made in closed front pattern with or without cover.

AB229 As the result of many years of specializing in home-ventilating, the "Range-Ventor" is offered by the Universal Blower Co., Birmingham, Mich. Objectionable heat and odors from cooking rise up under the hood, where a built-in electric fan quickly forces them outside.



The "Range-Ventor" Ventilates, Protects Walls.

AB230 Incinerators are needed in present-day homes more than ever before. Automatic heat makes impossible the burning of trash in the house heater. The Ready Built Kernerator, developed by the Kerner Incinerator Co., Milwaukee, illustrated here, is a compact, self-contained unit which is installed in the basement wall when the building is being erected and is usually connected to a flue which serves other equipment.

Ready Built "Kernerator" is Portable or Bricked-in.



AB231 A new, yet well proven development in hot water tanks is offered by Porcelain Steels, Inc., Cleveland, the "Porcel-Clad" hot water tanks that are porcelain enameled both inside as well as outside. A twenty-year guarantee covers these tanks. They have an instant appeal to home owners, for they protect from tank corrosion or "rusting."



"Porcel-Clad" Hot Water Tank.

AB232 "Build a Beautiful Home With Beautiful Windows" is the title of a new 24 page brochure or sales manual on Ceco steel casement windows issued by the Ceco Steel Products Corp., 1143 N. 11th St., Omaha, Neb. Presenting 20 large photographs this booklet pictures many beautiful window treatments with both exterior and interior views.

AB233 "It's Fun to Live, Electrically," is the intriguing title of a 24 page brochure by the General Electric Co., Home Bureau, Bridgeport, Conn. Kitchen planning for efficiency, style and attractiveness is discussed, diagrammed and illustrated. General Electric kitchen and basement equipment is also illustrated.

AB234 Adequate wiring and sufficient outlets for the modern home are stressed in a very interesting way in a 24 page booklet by Pass & Seymour, Inc., Syracuse, N.Y., entitled "Are You Sure Your Plans are Complete?" Every room of the house is illustrated with emphasis placed on desirable electric outlets and conveniences.

AB235 "Thermador" electric heaters, developed by the Thermador Electrical Mfg. Co., Los Angeles, are presented in a new 4 page price list specification data sheet. These heaters include large built-in wall type heaters with electric fan for distributing the heat, also, long radiant bathroom heaters "Head-to-Heels," smaller radiant and convection type bathroom heaters.

AB236 The "Aerofuse Outlet," a flush type ceiling diffuser for fresh air, either hot or cold, has been developed by Tuttle & Bailey, Inc., New Britain, Conn., and illustrated and described in a new 8 page data sheet (Catalog No. 40). The Aerofuse Outlet is a circular grille in sizes ranging from 4½ to 54 inches.

AB237 Griffin surface hinges, a popular cost-cutting item by the Griffin Mfg. Co., Erie, Pa., are illustrated and described in a new 6 page folder.

AB238 Shepard home lifts for passenger elevators are presented attractively in a little 16 page folder "What Users Say about the Shepard Home Lift," compiled by The Shepard Elevator Co., Cincinnati, O.

AB239 Outdoor fireplaces and how to build them are very completely and attractively presented in a new portfolio by the Hancock Iron Works, 52 West Pike St., Pontiac, Mich. Five popular designs for stone and brick outdoor fireplaces are included and a special section tells all about the Hancock outdoor fireplace equipment, including barbecue spits, grill.

AB240 Kimball elevators, the product of Kimball Bros. Co., Council Bluffs, Ia., are presented in a series of 4 page data sheets—one featuring the Kimball straight-line-drive elevator machines, another the Kimball light electrics.

Readers Service Department Continued to Page 70

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 72

"ONE OF OUR BEST 'SALESMEN' IS *ASBESTOS*"

Say leading
American Builders

ONE OF THE LATEST additions to the J-M line is this new Cedar-grain American Method Shingle (No. 607). Its greater length and simple nailing method make installation fast and easy. Its interesting grained texture adds beauty and distinction to any house. And roofs of this attractive new fireproof shingle cost but little more than a good-grade wood-shingle roof.



TYPICAL of one of Philadelphia's most successful developments is this attractive home. The builder, John H. McClatchy, uses No. 35 J-M Asbestos Shingles on the roofs, J-M Asbestos Clapboards combined with stone on the sidewalls . . . finds they offer selling advantages that appeal to every prospect.



LOW-COST houses in the widely talked about promotion of Framingham Homes, Inc., near Boston feature J-M No. 607 Asbestos Roof Shingles and J-M Asbestos Clapboards. They add little if any to the price of the houses; they add fire-protection and low upkeep cost to their selling features.



The fire-safety and lasting beauty of Johns-Manville Asbestos Shingles for roofs and sidewalls . . . plus the fact that they need little if any maintenance . . . give you selling arguments few buyers can resist.

WHEN you build with J-M Asbestos Shingles you provide unquestionable proof that your houses are built for beauty, permanence and fire-safety. Their texture has all the attractiveness of weathered wood. As for durability, they cannot rot or decay. They won't burn, and you can apply a blowtorch to J-M Shingles to prove it! And because they never need paint to preserve them, J-M Asbestos Shingles give you a selling point on low maintenance that alone is sure to sell prospects for you.

For Modernizing, Too

Johns-Manville Asbestos Shingles and Clapboards are easily and quickly applied on new work or old. Give new beauty, new fire protection, save money on upkeep. Easy to sell, surprisingly low in cost. J-M Time Payments

make it easy for any owner to buy. Check the low cost of using J-M Asbestos Shingles on roofs and sidewalls. There's a type and style for homes in every price class. Backed by the name Johns-Manville—the name that every home owner recognizes as a symbol of quality—they help you do better building or modernizing work . . . sell jobs faster. For complete details, just write Johns-Manville, 22 East 40th Street, New York, N. Y.

SILENT SALESMAN

This good-looking plaque, furnished free, identifies J-M products in your houses. Ask to see one.



JOHNS-MANVILLE Building Materials

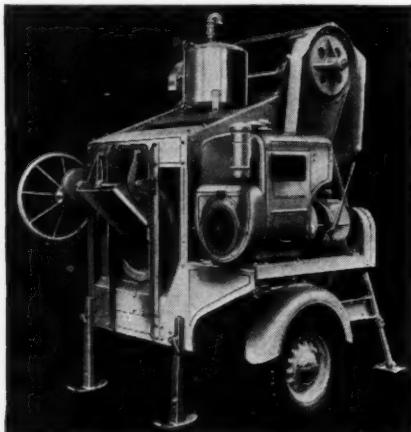
ASBESTOS AND ASPHALT SHINGLES • SUPER-FELT ROCK WOOL HOME INSULATION • INSULATING BOARD
FLEXBOARD • ASBESTOS WAINSCOTING • HARDBOARD • ROLL ROOFINGS, etc.

SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on page 72 for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.

NEW MODELS, POWER EQUIPMENT & TOOLS

AB241 Due to the successful record of the air cooled engine, whose use the Jaeger Machine Co., Columbus, O., pioneered on thousands of contractors' pumps, this type of power has enjoyed growing popularity on concrete mixers also. This latest model Jaeger 10S "Speedline" mixer is an example. It is equipped with Model VE-4 Wisconsin air cooled power unit, which is not only lighter, simpler and more compact but eliminates the usual hazards of cold weather operation.



New Jaeger 10S "Speedline" Mixer.

AB242 A new $\frac{1}{2}$ inch drill, Model 80, is announced by Skil-saw, Inc., 5031 Elston Ave., Chicago. It is compact and light in weight, weighs only 8



New Skilsaw $\frac{1}{2}$ Inch Drill Model 80 Weighs 8 pounds.

lbs., and is 100 per cent anti-friction bearing construction. It is only $11\frac{1}{2}$ " long overall and $9\frac{1}{4}$ " high. Its attractive streamlined design is an important factor in achieving the perfect balance that means easier handling of the drill in all positions. A powerful Universal motor assures faster drilling. Model 80 has a no-load speed of 450 R.P.M. and a full-load speed of 300 R.P.M.

AB243 Fred W. Wappat, 7323 Penn Ave., Pittsburgh, has announced a number of improvements in Model A-9" electric hand saw, now on the market. The new Model A-9" is more rugged and, with a larger motor giving a free speed of 3400 R.P.M., has 20 per cent more power than the previous model. The cutting capacities have been increased to $3\frac{7}{16}$ " square cut and $2\frac{13}{16}$ " thick material at 45 degree angle, jack rafter cuts for any pitch roof being possible.

New Model Wappat Electric Hand Saw A-9".

Model A-9" operates on either AC or DC current either 110 or 230 volts. Abrasive discs can be attached to this electric hand saw for the cutting of tile, brick, marble, concrete, etc.

AB244 The Construction Machinery Co., Waterloo, Ia., has expanded its dual prime pump line with the addition of combination wet vacuum and



CMC Well Point Pre-Drainage Pump.

dual prime units especially adapted for well point pre-drainage systems. These "Triple Prime" pumps are made in 4", 6", 8" and 10" sizes. Features of these pump units are their better adaptation to well point pumping than the conventional centrifugal pump.

Readers Service Department Continued to Page 72

AB245 The Black & Decker Mfg. Co., Towson, Md., has brought out an exceptionally valuable piece of literature, their "Portable Electric Saw Handbook." This is an illustrated book of 24 pages and covers and, besides telling all about the construction of the Black & Decker electric hand saws, it illustrates many out-on-the-job uses that are both time and labor saving. A special section of great value discusses how to get electric power on to the job. This section on "Power Sources" will be studied with profit by all contractors and builders.

AB246 Power excavating with Blaw-Knox two-line lever arm buckets is covered in a comprehensive 36 page catalog by the Blaw-Knox Co., Pittsburgh. This is really a text book on power excavating covering sizes and types within a wide range.

AB247 Mack's trucks for building contractors and building material dealers are presented in four new brochures each devoted to 1941 model Mack trucks of different sizes. Light trucks, medium trucks, heavy hauling trucks and truck tractors are the classes covered—Mack Trucks, Inc., New York City.

AB248 "The Electric Carpenter" power woodworking machine, a rugged, versatile outfit, offered by the Messinger Mfg. Co., Tatamy, Pa., is illustrated and described in the new 6 page folder.

AB249 A fast printing machine for producing whiteprints is the Ozalid Model F, developed by the Ozalid Corp., Johnson City, N.Y. A new 8 page broadside shows all about this machine and what it will do.

AB250 Reid-Way floor sanders offering "3 exclusive features" are presented in a new 4 page data sheet which also describes the Reid-Way system of floor finishing which guarantees profits and increased business to Reid-Way users—Reid-Way Corp., Cedar Rapids, Ia.

AB251 "Rafters Cut Without Marking—all framing cuts for home made in less than a day's time!" That is the story told in a new leaflet by J. D. Wallace & Co., 134 S. California Ave., Chicago, telling of the use of the No. 4660 Angulator on the Wallace No. 1 radial saw. With this device it is not necessary to mark the rafters before sawing.

AB252 The Guild portable sander, developed by the Syracuse Guild Tool Co., Syracuse, N.Y., is illustrated and described in a new folder.

AB253 Babcock spruce ladders, which are stocked by many retail lumber dealers, are cataloged in a new 36 page vestpocket handbook of interest to all ladder users. Some novel ideas for ladder staging, extension ladders and trestle ladders are included—W. W. Babcock Co., Bath, N.Y.

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 72



**"I SPENT \$390
LAST YEAR FOR ADJUSTMENTS
ON WINDOWS, DOORS, ETC."
SAYS A PROMINENT OHIO
BUILDER**



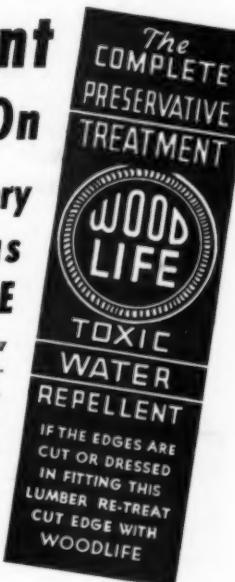
WOODLIFE has been
used for years by leading
millwork manufacturers

**No Money Spent
For Adjustments On
This House . . . Every
piece of wood in it was
treated with WOODLIFE**

It costs just a few cents to treat a window with WOODLIFE—not much more for treating a door. You get protection for years to come—against swelling, shrinking, warping, checking and grain raising as well as decay and stain.

The home owner gladly pays for this protection—all it costs him is \$12.50 extra to have all doors and windows WOODLIFE-treated in the average \$8,000 house.

You can treat millwork in your own easily constructed tank, make a profit on the treatment itself, and save hundreds of dollars on service complaints. Send today for complete information and WOODLIFE-treated samples.



The WOODLIFE "Seal of Approval," given only to customers who treat millwork properly, according to accepted standards.

EVERY LUMBER DEALER AND BUILDER knows that millwork must be able to "take it" in these days of weather-proofing and air conditioning. In the above house, at 1430 Long Rd., Kalamazoo, Mich., WOODLIFE-treated millwork has proved that proper preservation can keep pace with modern construction methods.

Protection Products Mfg. Co.

Mfrs. of PRESERVATIVE SOLUTIONS for

Research Laboratory and Plant KALAMAZOO,

19

Years

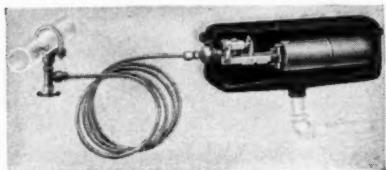
MICH.

SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on this page for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.

HEATING & AIR CONDITIONING PROGRESS

AB255 McDonnell & Miller, Wrigley Bldg., Chicago, offer a new "snap action" valve for humidifier pans designed to eliminate valve sticking or clogging from lime, scale or mud in the pan. A cam-and-roller action causes it



New McDonnell Humidifying Valve

to snap from tight closure to wide open whenever the water level drops a quarter of an inch. There is no slight cracking or seeping action. When the water level rises to the proper level the valve snaps to the closed position.

AB256 Illustrated is one of several models of "Motorstokor," the automatic burner for anthracite fuel in the buckwheat or rice sizes, offered by



"Motorstokor" Automatic Coal Burner.

Motorstokor Division, Hershey Machine & Foundry Co., Manheim, Pa. It feeds direct from bin to fire and automatically removes ashes to sealed containers, eliminating all shoveling and making for clean and dustless operation. This unit replaces the grates and may be installed in any standard coal burning furnace or boiler, is equipped with a set of Minneapolis-Honeywell thermostatic controls for full automatic heat and is available in a wide range of sizes for new homes or old.

AB257 A "gas saver" for small homes, is the description applied to a new model in the line of "Superflex" air conditioning furnaces announced by Perfection Stove Co., Cleveland. Featured as supplying 24-hour air conditioning, it operates on the 3-stage principle. It is also a space saver, for it occupies only approximately four square feet of floor space (24½ x 24½ inches). "In most small homes this 3-stage system calls into use the second stage which is a low, or coasting fire, during most of the time, and in milder weather alternates between coasting and pilot stages, with con-

Small "Superflex"
Gas-burning
Heater.



tinuous blower operation, thus avoiding stratification," the announcement says.

AB258 A new product of an old established concern is the Durabilt stoker recently introduced by the Durabilt Steel Locker Co., Aurora, Ill. This new quality coal stoker for homes is illustrated and described in an attractive 3-color data sheet of 4 pages.

AB259 Two thoroughly up to date units of one of the oldest heating equipment manufacturers, The H. B. Smith Co., Inc., Westfield, Mass., are the Smith No. 160 series home heating units for oil, gas or stoker firing and the Smith Mills No. 15 boiler for small homes. Each of these new lines of heating equipment is attractively presented in a new 4 page data sheet.

AB260 The Combustioner Div., The Steel Products Engineering Co., Springfield, O., has prepared a striking 12 page portfolio analyzing coal stoker performance and relating the actual experience of numerous home owners and builders with Combustioner stokers. "Meet Your Neighbors" is the title of this interesting document.

AB261 Reynolds streamline pre-fabricated air conduit heating and cooling is presented in a new 12 page data sheet from the Richmond Radiator Co., Inc., Uniontown, Pa. Prefabricated ducts and fittings including elbows, transitions, stackheads and outlets often cost less and usually produce a better job.

AB262 Payne modern console heaters (gas burning) are illustrated and described in a new 4 page data sheet from Payne Furnace & Supply Co., Inc., Beverly Hills, Cal.

AB263 Bertossa air conditioning units, presenting products of Jackson & Church Co., Saginaw, Mich., are covered in a series of new 4 page data sheets. Included are the Bertossa gas-fired air conditioning units for homes, similar equipment oil-fired, a large oil-fired power unit and a low priced gravity unit for homes, either oil or gas-fired.

AB264 "York Heat" which is said to embody the most complete line of oil burner equipment in the world is briefly presented in a new 4 page data sheet by the York Oil Burner Co., Inc., York, Pa.

AB265 The Koven waterfilm boiler has been developed for the one family house for automatic firing with oil, gas or stoker coal. A new 4 page data sheet from Koven Waterfilm Boilers, Inc., Jersey City, N.J., gives details of the welded steel flash boiler.

AB266 A redesigned and restyled Rudy oil heat air conditioner of the Rudy Furnace Co., Dowagiac, Mich., is attractively presented in a new 8 page data sheet which gives complete details of the heater and suggests how it should be installed in the modern homes.

CLIP AND MAIL TO CHICAGO

Reader Service Department,
American Builder,
105 W. Adams St., Chicago, Ill.

(Nov. 1940)

Please send me additional information on the following product items, or the catalogs, listed in this department:

Numbers _____

Name _____

Street _____

City _____

State _____

OCCUPATION* _____

*Please note that occupation must be stated if full service is to be given.

How to Lay Linoleum for Most Satisfactory Service

IN answer to queries from builders and contractors as to the types of subfloors over which linoleum can successfully be installed, several approved methods are presented on this page.

A double wood subfloor provides one of the best surfaces for linoleum installation. Although a large amount of linoleum is laid over a single wood subfloor, it is not recommended generally because the floor boards may show through. Lining felt is desirable but not mandatory for monolithic subfloors (concrete, terrazzo, etc.), but it is essential and required in one manufacturer's specifications (Armstrong) for laying linoleum over wood subfloors.

The most satisfactory type of wood subfloor for linoleum is a bottom layer of $\frac{3}{8}$ -inch kiln-dried tongue-and-groove boards, not over 8 inches wide, face nailed at each end and at every bearing with two eight-penny nails. This should be covered with building paper and 25/32-inch kiln-dried tongue-and-groove boards not over 3 inches in face width. These boards should be laid at an angle of 45 degrees to the boards in the first layer. This assures that none of the seams in the linoleum will run in the same direction as the boards of the top layer, and prevents the seams from opening because of expansion or contraction. A less expensive installation is laying the top boards at an angle of 90 degrees to the under floor. However, if this method is employed, the lining felt and linoleum should be laid so that the seams run across—and not parallel with the boards in the top layer. A seam protector is recommended if the laying of the linoleum brings a seam parallel to the direction of the floor boards.

If the floor is an old double floor with a tongue-and-groove top layer, the surface should be examined carefully and all defective boards should be replaced, loose boards renailed, all nails countersunk and uneven joints planed or sanded smooth. Crack wider

than $\frac{1}{8}$ -inch or holes larger than $\frac{1}{4}$ -inch diameter should be completely filled with wood or plastic wood.

The least expensive way to convert a single tongue-and-groove subfloor into one of double proportions is to cover it with a layer of building paper and hard-pressed wallboard or plywood. Exact specifications should be secured and followed in this installation. If the single subfloor consists of square edged boards, it should be covered with a layer of building paper and a single layer of 25/32-inch kiln-dried, tongue-and-groove.

It might be well to point out that numerous modern builders are recommending permanent linoleum installations in rooms other than kitchen and bath because the linoleum is easy for the housewife to clean and wax, is resilient and quiet.

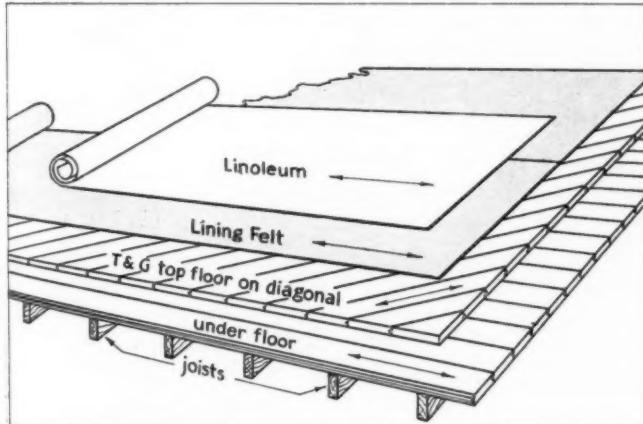
Linoleum makes a very satisfactory installation over supported concrete subfloors, but care should be taken that there is no moisture lurking in the concrete. Where this condition exists, asphalt tile, which is moisture resistant, is recommended for the flooring. Even though a concrete floor is well ventilated on the underside, moisture in the concrete will eventually ruin an excellent linoleum installation. The Armstrong Cork Company has offered to furnish builders or contractors with a simple but excellent test for determining if the concrete is dry.

Recently poured cement should be allowed to dry for several months before linoleum is installed. While most concrete floors are stone-filled concrete, the builder occasionally is called upon to install linoleum on concrete floors which are poured over cinders. Cinder-fill concrete presents a particular dampness problem and careful tests should be made to determine its dryness.

Smooth, trowel-finished concrete is preferable for linoleum installations. Float-finished concrete is undesirable because it may be rough, dusty or unsound. All concrete floors should be carefully inspected to determine whether the finish coat has a good bond to the under layer and is free from scales or cracks caused by the concrete freezing.

Imperfect concrete can easily be conditioned. Expansion cracks can be filled with a mixture of portland cement and plaster of Paris. Fillers may be used to level off rough spots or hollow

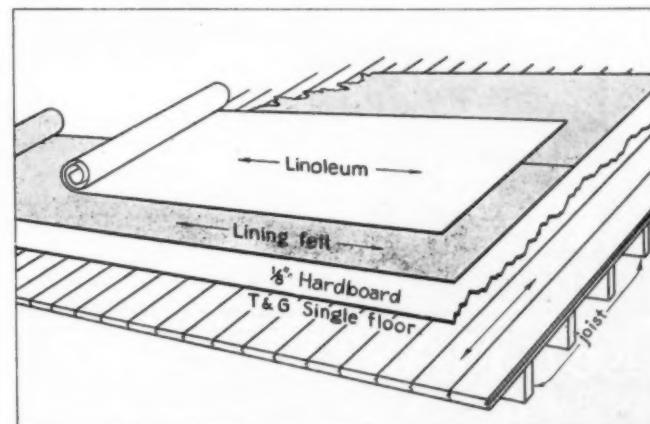
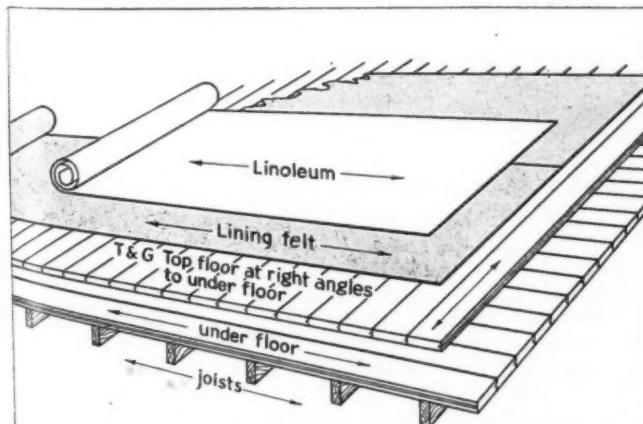
(Continued to page 97)



FOR a most satisfactory job, lay linoleum on felt over T & G diagonal flooring, as above; otherwise at right angles, as below.

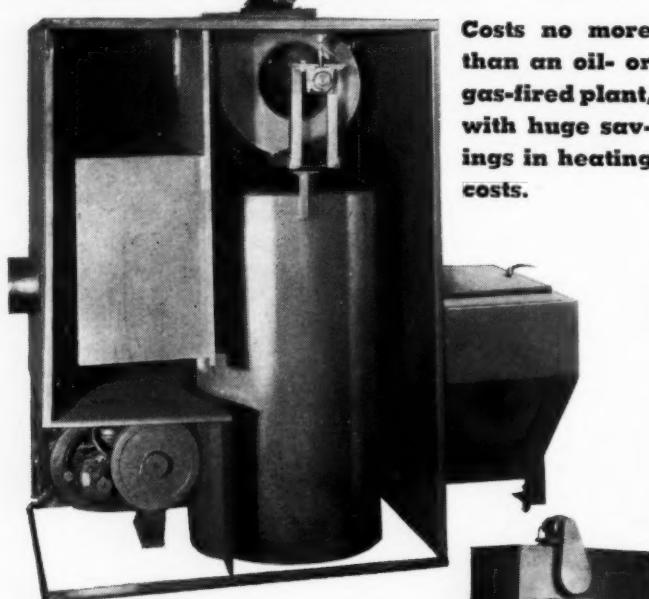


OLD floors should be repaired, tightened and smoothed, as shown above, to receive linoleum, or put over a hardboard base (below).



INVESTIGATE
this NEW Low-Cost
Heating System for
LOW-COST HOUSES

KÖL-MASTER STOKER-FURNACE UNIT



Costs no more
than an oil- or
gas-fired plant,
with huge sav-
ings in heating
costs.

THE PRICE IS RIGHT!

Owners of low-cost houses **want** automatic heat. They **need** low operating cost. The new KÖL-MASTER Stoker-Furnace unit gives them what they want and what they need. Low first cost. Low operating cost. This new KÖL-MASTER unit is a complete low-cost heating system for low-cost houses. It will help you sell houses. A sure-fire winner with owners when you show them how to get more house for the money by installing a KÖL-MASTER. Write today for free KÖL-MASTER literature.



WRITE FOR
FREE
LITERATURE

Dealers: Perhaps you would like to represent us in your territory. Exclusive patented features of the KÖL-MASTER Stoker-Furnace give you a **real** sales story. And the price is right. Send a letter or post card today for information.

KÖL-MASTER CORP.
OREGON • • • ILLINOIS

News of the Month

Building Activities and Meetings

September Residential Volume Highest for That Month During 11 Year Period

RESIDENTIAL contract awards in 37 eastern states, according to F. W. Dodge Corporation, involved 24,758 projects valued at \$152,372,000 during September, as compared with 17,589 projects valued at \$129,680,000 in September 1939. This represents a gain of 40.8 per cent in the number of projects and a gain of 17 per cent in their value. September volume equalled that of August. This is the best September total in eleven years, the 1940 value exceeding the September 1929 figure by about \$37,000,000. The September 1928 total was over \$200,000,000; the same month of this year is approximately 75 per cent of that 1928 figure.

Statistics for the four classes of construction in 37 eastern states are as follows:

37 Eastern States	Sept., 1940	Sept., 1939	August, 1940
Residential	\$152,372,000	\$129,680,000	\$152,988,000
Non-Residential	101,295,000	82,466,000	119,189,000
Public Works	59,898,000	71,418,000	119,358,000
Utilities	34,086,000	39,663,000	23,406,000
Total	\$347,651,000	\$323,227,000	\$414,941,000

Housing Census Figures Announced

DIRECTOR William Lane Austin, of the Bureau of the Census, Department of Commerce, has announced the preliminary figures of the Housing Census in 357 cities of 25,000 inhabitants or more. On April 1, 1940, there were 13,749,593 dwelling units in the 357 cities combined, according to the preliminary count. Of this number, 13,094,392 were occupied by households enumerated in the Population Census at their usual place of residence, and 655,201 were classified under the general heading "vacant." This release includes the cities of 25,000 inhabitants or more for which dwelling unit figures were previously released.

The "vacant" dwelling units amounted to 4.8 per cent of the total. They comprised mainly dwelling units vacant and for sale or rent, but also included some units held for absent households and a small number of units temporarily occupied by non-resident households, that is, by households which reported that their homes were located elsewhere. In later releases, the vacant dwelling units for sale or rent and the other vacant dwelling units will be shown separately.

The figures include dwelling units in resort areas occupied or available for occupancy on a seasonal basis, as well as ordinary units occupied or available for occupancy on a permanent basis.

The number of occupied dwelling units represents approximately the number of families in each city and may be roughly compared with the number of private families reported for each city in the 1930 Census.

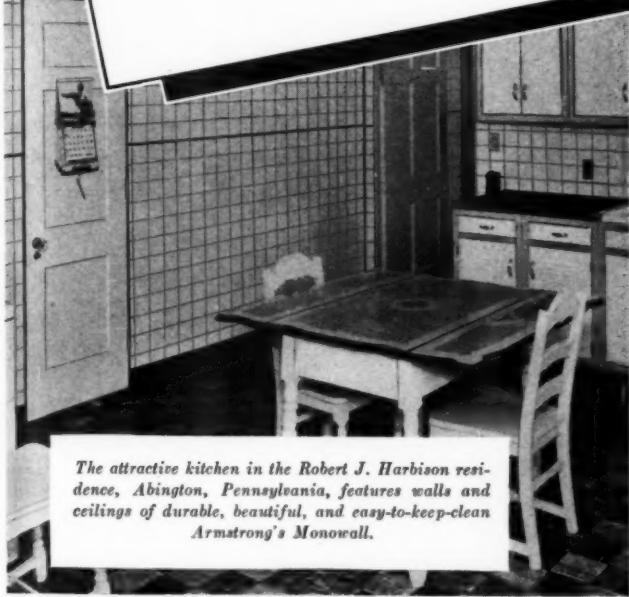
Although the average percentage of vacancy in all 357 cities was 4.8, there was a wide range, from less than 1 per cent in the industrial towns of Hamtramck, Mich.; Aliquippa, Pa.; East Chicago, Kokomo, and Marion, Ind.; New Britain, Conn.; and Warren, O., to 23.9 per cent in Warwick, R.I., and 36.2 per cent in Miami Beach, Fla., both seasonal resort cities.

These housing figures are based on preliminary counts made by local supervisors and are subject to revision. Similar preliminary announcements of the number of dwelling units in other cities containing 25,000 inhabitants or more will be made as the figures become available.

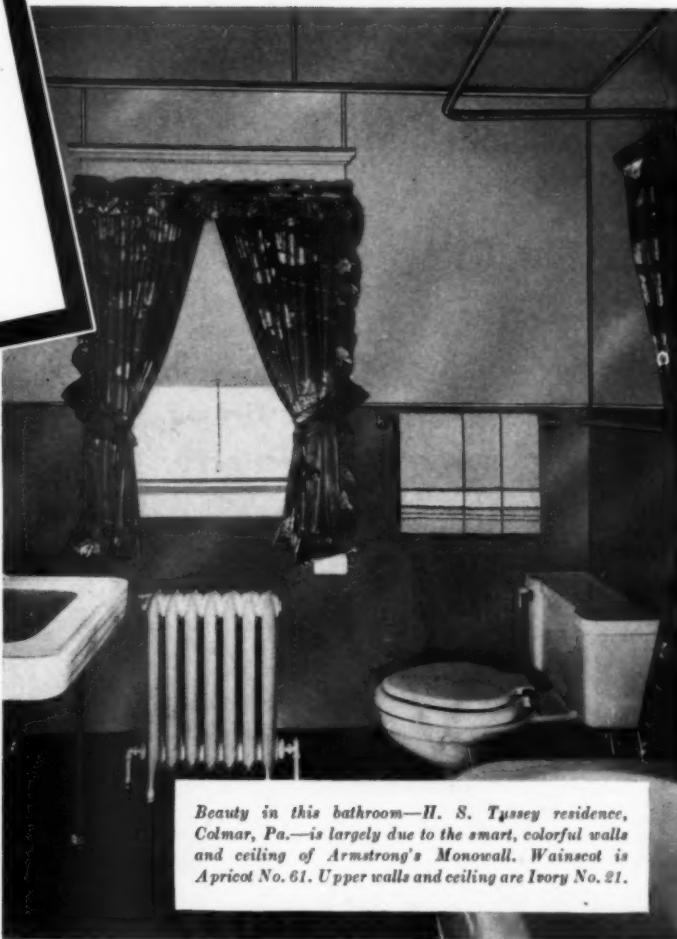
Gives Home Laundry Advice

ADVICE that might be just as useful to builders and home planners as to housewives, in respect to intelligent handling of the home laundry problem, was given to an audience in the auditorium of the John Wanamaker store in New York City recently, by Mrs. Ruby G. Littlefield, the director of the General Electric Company's home laundry institute at Bridgeport, Conn. She pointed out that the laundry room should be planned to serve more than one purpose, such as sewing, gardening, canning and storage, and located for plenty of light off the kitchen, if possible.

PUT MORE "SELL" IN THE HOUSES YOU BUILD



The attractive kitchen in the Robert J. Harbison residence, Abington, Pennsylvania, features walls and ceilings of durable, beautiful, and easy-to-keep-clean Armstrong's Monowall.



Beauty in this bathroom—H. S. Tussey residence, Colmar, Pa.—is largely due to the smart, colorful walls and ceiling of Armstrong's Monowall. Wainscot is Apricot No. 61. Upper walls and ceiling are Ivory No. 21.

You'll Please Prospects with Walls and Ceilings of Smart Armstrong's De Luxe Monowall

SUCCESSFUL builders put features into their houses to catch the feminine eye . . . sales points like colorful, easily cleaned walls and ceilings of Armstrong's De Luxe Monowall. This low-cost wood-fibre board not only offers decorative and practical advantages to the prospect, but has money-saving advantages for the builder as well.

Thirty-three factory-applied colors and patterns are available in Armstrong's Monowall—plain colors as well as tile, wood, and marble effects to blend with any interior schemes. Various size panels (up to 4' x 12') and special channels and moldings create a new note in smart styling. Monowall is smooth

like tile, and just as easy to clean. Furthermore, it is so durable that even a solid hammer blow won't mar its glossy finish.

Whether used in new construction or remodeling, Armstrong's Monowall saves time and money for the builder because it is so easy to erect. The large panels are light in weight and readily handled by one man. They can be quickly and permanently installed on walls and

ceilings with adhesive. Old plaster (if firm and solid) does not have to be removed.

If you're not already using Armstrong's Monowall in your houses, it will pay you to write today for complete facts and a sample of this decorative, sales-making material. Address Armstrong Cork Company, Building Materials Division, 979 Concord St., Lancaster, Pennsylvania.



Armstrong's MONOWALL

TEMLOK INSULATION—SHEATHING, LATH, DE LUXE INTERIOR FINISH

Introducing A NEW CRAW-FIR-DOR MODEL The Flush Type



Other two designs are slightly higher.

Have you discovered the Craw-Fir-Dor? You should . . . for here is the most popular overhead-type garage door in the nation. Garage owners and prospective home owners like it because it operates so easily . . . because it sells for as little as \$28. Realtors and builders like it because it gives homes real sales appeal . . . because any carpenter can install one in less than half a day. Dealers like it because it puts them back in the overhead-type garage door business . . . because it never needs servicing.

Investigate now how the four Craw-Fir-Dor designs can serve you. With the introduction of the flush-type design, you have a model to suit every architectural style. Each Craw-Fir-Dor is a tested, approved door of durable Douglas fir with extra strength hardware and an automobile trunk-type lock. It is pre-fitted for an 8' x 7' opening and weather-stripped. Needs only 2" headroom and side room. Your dealer has Craw-Fir-Dors or can quickly get one for you. For more information, write Fir Door Institute, Tacoma, Washington.

Now nationally advertised in American Home and Better Homes & Gardens

Craw-Fir-Dor

SELF ENERGIZING • ONE PIECE • OVERHEAD TYPE

For special residential or industrial installations, write Crawford Door Co., Detroit, Mich., who make a complete line of sectional overhead-type doors.

News—(Continued from page 76)

Celebrate 30 Years of Progress

A FULL generation, exactly thirty years ago, two young brothers, Charles A. and W. Harrison Upson, founded The Upson Company at Lockport, N.Y. Armed with knowledge and a measure of practical experience, they put their ambitions and ideals to work. Specialists in the development of paper products, they sensed the potential market for a dependable wallboard.

Two years of intensive research went into the product before any attempt was made to market it. The result was the first wallboard made in 4-ply, the first to be kiln-cured or pre-shrunk, the first to be waterproofed, and the first to be surface-filled so that a low-cost but attractive painted surface might be obtained.

The fact that The Upson Company has been under the same ownership management for thirty years and will continue to be for as far as anyone can foresee is another reason for friendly dealer relationships. Charles A. and W. Harrison Upson are still, after thirty years, the controlling factors.

CHARLES A. UPSON,
president (left), and **W.
HARRISON UPSON, JR.**,
secretary - treasurer.



Rename Lightweight Channel Section

THE Jones & Laughlin Steel Corporation, Pittsburgh, has changed the name of its lightweight channel section to Junior Channels, in order to better associate the product with the Junior Beam, a structural steel section long known to the construction industry. The Junior Channel, the newest of these structural steel sections and designed especially for stair stringers and stair treads in schools, auditoriums, hotels, Federal Housing Projects, and other light occupancy buildings, was recently announced as the lightest member of its kind in the world, the 10-inch section weighing only 6.5 pounds per foot.

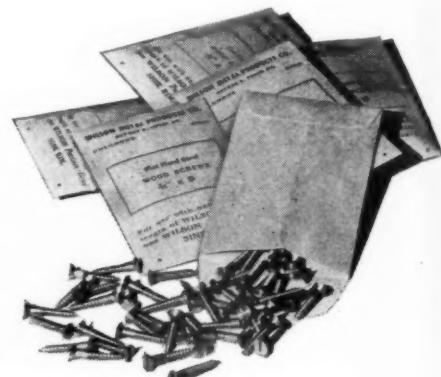
New Packaging for Fastenings and Labeling of Metal Trim

A SURVEY to determine the type of fastening best suited to each individual shape of Wilson Metal Trim has just been completed by the Wilson Metal Products Co., Columbus, Ohio.

As a result of this survey the company is including with each stock length of the metal trim an envelope containing the proper type and number of fastenings for use with each particular shape. On each package of screws, escutcheon pins or nails, the size, type and uses are plainly marked. A helpful chart is also being supplied to dealers which shows the proper fastenings to be used with each of the 180 individual shapes.

Another outstanding improvement is the individual packaging of Wilson Metal Trim. Each piece is now individually packed in heavy kraft tubing. For easy dealer identification the regular lustre finish is being packed in brown tubing and Alumilite finish in grey tubing, the catalog number of the metal trim being stamped plainly on the outside of the tubing. In addition to its identification value this heavy tubing assures maximum protection for the metal against nicking and scratching in transit. In shipments that include numerous shapes, pieces of the same shape are securely taped together.

NEW packaging
for screws, etc.



New Heating System for Low-Cost Homes

THE Kol-Master Corporation, Oregon, Ill., has perfected a new stoker-furnace unit for low-cost automatic heating plants for low-cost houses. The unit includes a counter-flow furnace, circulating fan and filters, and a Kol-Master stoker of suitable capacity. Either the Kol-Master Dial-Set or Weather-Master Model is provided, and the unit is offered in both hopper and bin feed types.

The Kol-Master Dial-Set stoker has a number of features of special interest to owners seeking low-cost operation. It is equipped with a reverse-flight feed screw under the retort that causes a lifting action and distributes coal evenly to all parts of the fuel bed. Positive control of the fuel bed makes possible use of the automatic combustion control featured on the Kol-Master stoker. Domestic models have separate motors on the blower and on the feed.

Introduces New Oil-Fired Furnace

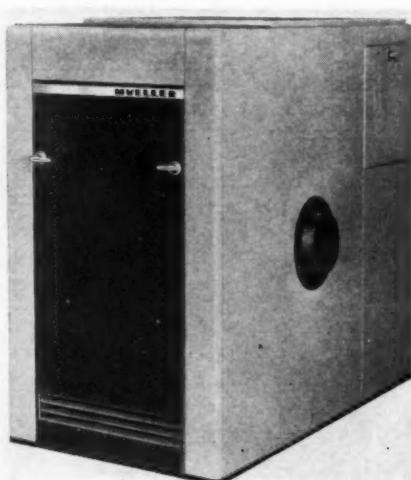
THE L. J. Mueller Furnace Company, Milwaukee, Wis., has announced the No. 57 oil-fired furnace, a new and larger model in their Series "50" oil-fired winter air conditioning furnace line.

The new No. 57 has a BTU capacity at register of 200,000 and 225,000. This, added to the 100,000 capacity of the No. 55 and the 150,000 capacity of the No. 56, provides a capacity range wide enough to meet most requirements.

The fan and motor assembly is cushion mounted and rubber insulated, with "V" belt drive and variable speed sheave. The filters are replaceable with high dust removal efficiency and large dirt holding capacity. The drum and radiator are of heavy gauge steel and electric welded, with increased flue travel. Flue outlet may be at either side, with cleanout opening opposite.

One of the many features is the fact that the unit is not limited to one fan size only, but fan selection can be made to meet the requirements of the home. The No. 57 has a range in maximum CFM air delivery, at $\frac{3}{4}$ inch static pressure, of from 3,500 to 6,400, by merely a change in the fan assembly furnished.

NEW furnace in insulated casing.



Begin Research on New Type Heating

A LONG-TIME research program for improvement of home comfort through steam and hot water heating will begin this fall at the University of Illinois. One-pipe forced circulation hot water, a new type of system developed in the last three or four years, will be studied this winter.

The long-time research project will be carried on by the University's Engineering Experiment Station in co-operation with the Institute of Boiler and Radiator manufacturers.

A three-day meeting of the institute's advisory committee with university engineers closed at Urbana Oct. 12. The committee approved plans for the first winter program, inspected the new I-B-R Research home in which the investigation is to be made, and decided to defer its formal opening until late in the year.

Members of the Institute of Boiler and Radiator manufacturers group who gathered at the university were: R. E. Ferry, New York, institute general manager; L. N. Hunter, Johnstown, Pa., National Radiator Co. research and development engineer; J. F. McIntire, Detroit, Mich., U. S. Radiator Corp. vice president; H. W. Randolph, Utica, N.Y., International Heater Co. vice president; S. K. Smith, Westfield, Mass., H. B. Smith Co. A member of the research committee not able to attend the meeting was J. P. Magos, Chicago, Crane Co. research laboratories directing engineer.



New Low-Cost Oak Flooring GIVES COSTLY PLANK-FLOOR EFFECT

HERE'S a new idea in hardwood floors! It's the new *factory-finished* Streamline Flooring created by Bruce. This genuine, full-thickness hardwood flooring has a smart new width (3 $\frac{1}{4}$) and beveled edges and ends that give the "patterned" appearance of costly plank floors. Its striking new beauty wins praises everywhere.

The factory-applied "Bruce-Way" finish on Streamline Flooring amazes home owners. For it won't scratch, chip or peel like ordinary surface finishes. That's because the finish is *part of the wood*. Its lustrous sheen stays beautiful for years.

What's more, this factory-finished flooring saves time and labor. When it's laid . . . it's finished. There's no sanding or finishing to do. It's a sensationally superior floor, yet costs no more—often less than ordinary flooring finished on the job. Streamline Flooring comes in Red and White Oak, Maple and Beech. Send coupon for free "Scratch Test" panel.



E. L. BRUCE CO.

1474 THOMAS STREET
MEMPHIS, TENN.

Hardwood Floorings • Floor Finishes • Terminix



"Bruce-Way" Surface Finish
Send for this "Scratch Test" Panel. Half is finished the new "Bruce-Way" used on STREAMLINE Flooring . . . other half finished the ordinary surface way. Scrape a coin across both finishes. See how the ordinary surface finish scratches and chips away . . . while the "Bruce-Way" finish is unharmed.

E. L. BRUCE CO., 1474 Thomas Street, Memphis, Tenn.

Gentlemen: Please send me free "Scratch Test" Panel and new illustrated literature on Bruce Streamline Flooring.

Name

Address

City State

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... What kind of Nails would we use on that New Roof?

A fine new roof—best quality shingles—it should last for twenty years! The shingles *will* last that long, or longer . . . but it takes more than shingles and careful laying of them to make a long-lasting roof. There's a little, inexpensive item that's such a small cost factor one way or the other that many builders ignore its importance. And that item is the NAILS THAT HOLD THE ROOF. For no roof is better than the nails that hold it. Rust begins its deadly work immediately with ordinary nails. But Maze Zincluds nails—dipped in pure, molten zinc—resist rust, and last much longer. Conservatively, they will double the life of your shingle roof. They are recommended by the Red Cedar Shingle Bureau.

They cost so little more (only 9 cents per square) that it is nothing short of "silly" to economize in this direction! Insist on Maze Zincluds!



Builders! "Sell" the advantages of Zincluds to your home-builders. Send for a supply of descriptive circulars that you can give your customers to help convince them.

Double the Life of Your Shingle Jobs! AT A COST OF ONLY \$2.00 PER ROOF

Never let it be said that you sent a roof to destruction before its time by permitting ordinary shingle nails to be used. Insist on Maze Zincluds Nails—they cost so little more per job. Their use will increase your reputation as a reliable builder!

W. H. MAZE COMPANY • PERU, ILLINOIS

MAZE
Zinclud **NAILS**

How to Arrange Kitchens for Various Types of Plan

THE first of these kitchen sketches and floor plans, all of which were designed by the St. Charles Manufacturing Co., St. Charles, Ill., represents the ideal layout for a perfect medium sized kitchen. The dimensions are 10'8" x 11', almost square. Doors at either end of the two side walls leave almost three walls clear for cabinets.

Traffic lane is along the end of the U and not through the work area, this permitting a symmetrical, balanced arrangement. Time- and labor-saving convenience can be appreciated from the fact that it is scarcely three steps from the refrigerator to the range and two steps from either of these centers to the sink. Although small in area, this kitchen provides an exceptional amount of storage space, with about 79 square feet of shelves in the wall cabinets and about 9½ lineal feet of base cabinets. This is ample for a house having a normal occupancy of six to seven persons.

The corner wall cabinets at either corner of the end of the U add greatly to the area of the upper shelf space as well as to the attractive appearance of the kitchen.



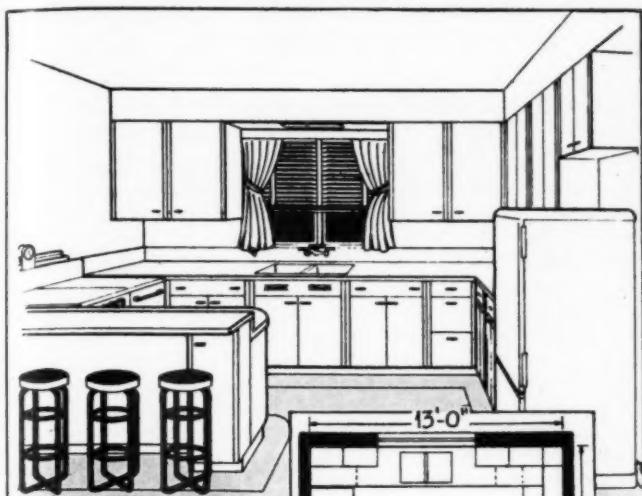
**U-Type Kitchen
With Ideal Size
for Perfect
Arrangement**

In-Built Snack Bar Can Be Used If Owner Prefers Instead of the Conventional Breakfast Nook

THE next kitchen illustrated is a variation of the U-type plan with a snack bar; this is an excellent arrangement for the home of larger than average size. Location of the service door and the door to the dining room, near together in one corner, permits a good U arrangement. The snack bar is located in the third corner, and offers a convenient arrangement for serving light meals to children; if preferred, the conventional nook could be used in the same space.

The bar arrangement as shown virtually gives a fourth side to the U and results in an exceptional amount of storage space. There are 53 square feet of shelf space in the wall cabinets and 15½ lineal feet of base storage, not counting the two additional cabinets at either end of the bar. This would be ample for a house with an occupancy of seven persons or more.

Except for the extra line of base cabinets, the kitchen is laid out in the traditional U, with the center beneath the windows. Refrigerator and food storage cabinets are at the right near the service entrance.

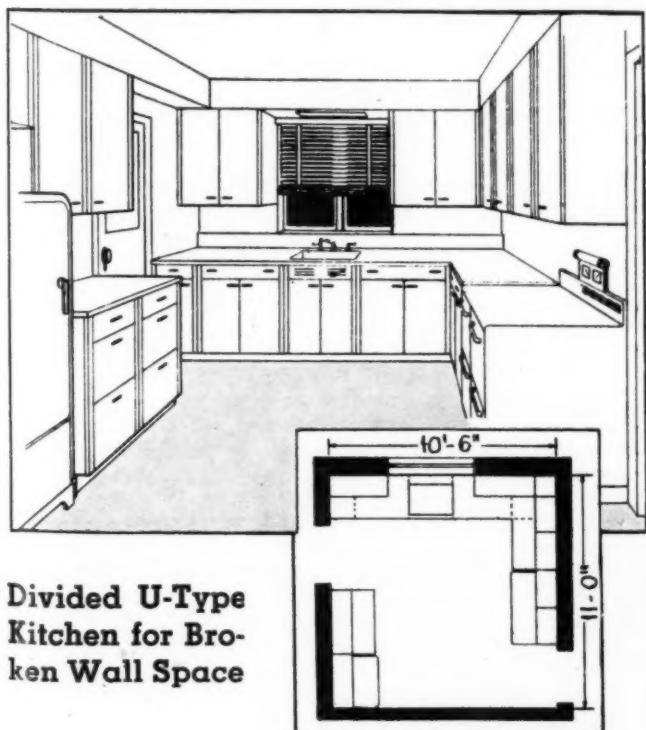


Variation of U-Type Plan with a Snack Bar

The Divided U-Type Kitchen Can Be Efficiently Arranged

KITCHENS having doors on opposite walls and at opposite corners, as shown below, require careful planning. The space on the short wall may be used for placement of one of the centers, in this case the refrigerator with food storage cabinets nearby and sufficient counter space on the base unit for food preparation. The counter is also next to the rear door, handy for the deposit of foods on delivery. The distinctive feature of the U-shaped kitchen is thus preserved although with a break in one side of it.

The range sets ideally into the side of the wall nearest the dining room, with ample counter space at hand for serving. This arrangement permits an unusual amount of upper storage space—65 square feet of shelf space in the wall cabinets. The base cabinet storage is reduced somewhat by the break in the U; even so, the full use of the rest of that wall permits 11½ lineal feet of base cabinets. On the whole, this should be ample for six to seven persons.



Divided U-Type Kitchen for Broken Wall Space



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in flooring Homes***

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OF OUR HELPFUL NEW FOLDER**

Harmonize floor with furniture . . . that's the modern idea for homes! . . . In the bedroom above, note how the absence of heavy graining in the floor makes for pleasing harmony with the smooth and simple modern furniture. Modern furniture is fine-grained . . . so is Maple . . . and the two live peacefully with each other. Not only Blonde Maple, but other modern furniture looks at home on smooth floors of Maple.

Home-owners—the whole family—will thank you for recommending Hard Maple. It's the longest-wearing comfortable floor and the most ideally suited for modern homes.

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*See our catalog data in Sweet's, Sec. 11/78.
Write for folder on floor finishes suitable for homes.*

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TO MANUFACTURE an improved building product of highest quality at lowest cost—a product that has proven itself in actual permanent construction by reducing costs to level of frame.

TO SUPPLY the entire building trade with more attractive and permanent construction with proven savings at every step, all the way from manufacturing to the finished job.

YOUR COMMUNITY will welcome your contribution to better buildings at lower cost. Your builders and prospective home owners are waiting for this better, lower cost material.

IF YOU ARE THE MAN we will equip you with exclusive line production machinery—Large production. Only one or two men. Equipment costs but fraction of other processes of equal capacity.

WE WILL SUPPLY YOU with processes to enable you to supply product in 40 colors, shades and textures. Your product will be capable of meeting all known building requirements and is now being used by Government-City Building Depts. throughout the country.

WE WILL GRANT YOU Manufacturing Franchise covering your locality—protecting your market, business and future, with available engineering and advertising service.

YOUR EARNING POWER AND FUTURE. Present manufacturers have pioneered the way for you. Some are selling at 100% over cost. Some are getting as high as 80% of the business in their territories.

YOUR OPPORTUNITY IS COMPLETE. Ready made. One that is proven. Ready for you to cash in on the great building upturn under way.

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How to Arrange Kitchens

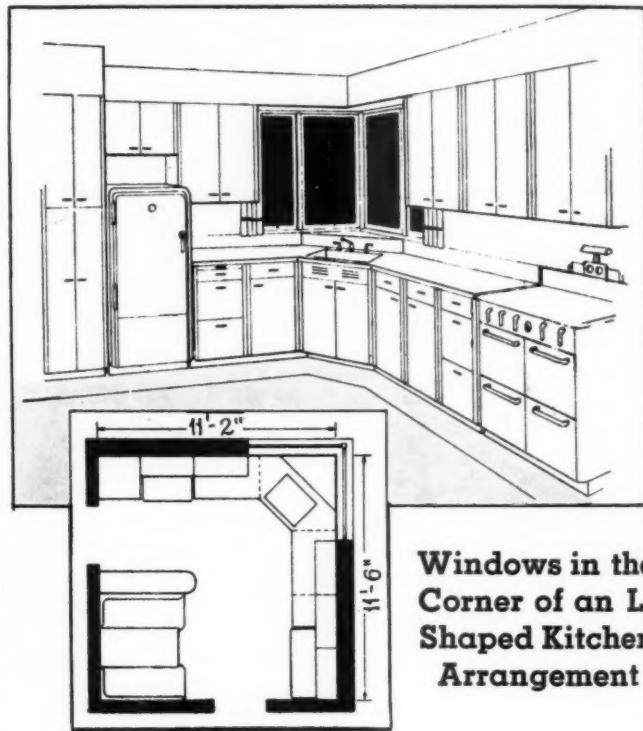
(Continued from page 81)

An Efficient Kitchen Can Be Laid Out Along Two Walls with a Window and Sink Located in the Corner

WHEN doors are located on two adjacent sides of the kitchen, as in the layout below, a novel and attractive arrangement is possible by placing the units in the form of an L with a corner window in the angle.

Inasmuch as two walls are entirely devoted to cabinets, all three work centers may be grouped in one continuous arrangement. This leaves the available corner of the other walls as an excellent spot for a dining nook or for placing a movable work table and some chairs.

This arrangement provides a surprising amount of upper cabinet storage considering the large amount of wall space devoted to windows—45 square feet of shelf space, exclusive of the tall cabinet which, if used entirely for shelves, would add 32 square feet. The base cabinet storage is 7½ lineal feet. The total is ample for a house with a normal occupancy of four to five persons and is really quite a sizable one considering that all units are along two walls.



Windows in the Corner of an L-Shaped Kitchen Arrangement

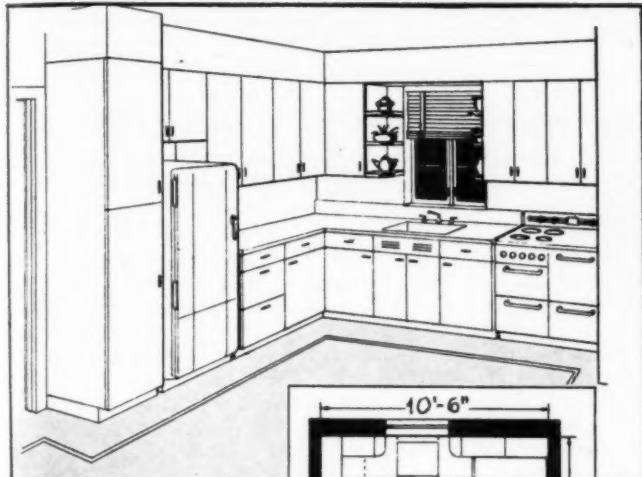
With Outside Door on One Side Near a Corner and Dining Room Door Centered Opposite, Use the Traditional L

AS IS frequently the case in simple five- and six-room plans, with kitchen and dining room placed to the rear of the living room extending across the front of the house, there is only one wall of this kitchen entirely free for placing the work centers. (See plan at top of next column.)

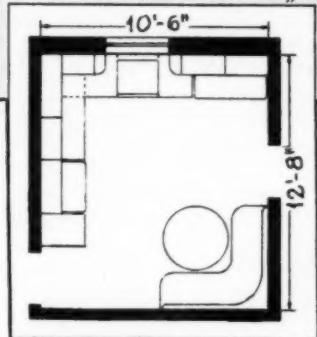
Since the door to the outside is at one end of the left wall, however, most of that wall is also available and permits an excellent L arrangement. The space in the opposite corner is well suited for use as a dining nook, either with built-in seats and permanent table or movable table and chairs. The range is convenient, both to the dining nook and to the dining room.

The tall cabinet at the extreme of the L, next to the service door, is convenient for storing implements and materials used in cleaning, also for storage of rubbers, galoshes and other outdoor clothing removed upon entering the house.

Storage for a family of five persons is amply provided in this arrangement. There are 56 square feet of upper cabinet shelf space, including the three upper shelves in the tall cabinet and 6 lineal feet of base cabinet space plus the lower storage space in the tall cabinet.



**The Traditional L-Type Place-
ment of Units with Centered
Window**



When All Walls Have Openings, the Broken L Can Be Used

THREE doors break up this space so as to prevent a continuous L and the space in the lower left corner is largely used by windows. The largest expanse of wall is logically used to place the sink and the counter for food preparation, with refrigerator at the end next to the door.

There is enough space on the adjoining wall to place the cooking and serving center there, thus giving the effect of an L arrangement. Wall cabinets 30" high over the range make considerable storage available at this center for utensils needed in cooking and dishes needed in serving.

Another factor here that influences the placement of the sink and work counter is the location of the windows. Wherever possible, it is desirable to have the sink beneath a window, even though in some L arrangements this might place the bulk of the counter space on the other leg of the L. The other corner, next to the outside door, makes an excellent spot for table and chairs, or for a built-in dining nook.



**The Broken L
with 2 Windows
and 3 Doors,
Outside Corner**

★ You can order all stock Douglas Fir doors pre-fitted at slight extra cost and grade-marked.



**TRU-FIT
Durable Douglas Fir
Entrance Doors**

**give your homes
that "final touch"!**

● The entrance door is one of the first things a prospect sees when he inspects your houses. An ordinary door does nothing to help you make a sale. But a Tru-Fit Douglas Fir Entrance Door is a big sales aid. Its design is distinctive. It's well-made from old-growth Douglas Fir, *the wood that lasts longer*. It's well hung because it came to you pre-fitted. It's in perfect condition thanks to the protective packaging and scuff-strips. Select a Tru-Fit Douglas Fir entrance door for your next house and see the difference it makes. 27 designs to choose from, and they cost no more than other good doors.

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Please send me your free catalog of Douglas Fir Doors, No. 2000.

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DOUBLE PROTECTION DOUBLE DUTY

THIS TANK IS PORCELAIN ENAMELED INSIDE AND OUT!

Imagine a hot-water tank whose inside and outside surfaces are as hard and smooth as the porcelain enamel on a kitchen range. You can see how the protection of a porcelain enamel lining would lessen the chances of tank leaks and rusty water; how it would lengthen the life of the tank.

You can *order* such a tank now and offer your customers this new, improved tank at a price any one can afford. All code requirements are fully met.

When the tank is porcelain enameled on ARMCO Ingots Iron, you may be sure of first-quality metal. You also can show your customers the famous ARMCO label, known to millions through more than 25 years of national advertising. Write us. The American Rolling Mill Company, 2801 Curtis Street, Middletown, Ohio.

ARMCO INGOT IRON
A NAME KNOWN TO MILLIONS



How to Arrange Kitchens

(Continued from page 83)

When Walls Are Broken Three Work Centers Can Go in Corners

INSIDE kitchens can have all walls so broken up that no one can be entirely used for units. This is usually due to the fact that the one outside wall must be used for both rear entrance door and, at the same time, must contain enough window area to light the room; this door is usually placed in the corner so only a limited number of units are possible along the adjacent wall. As in the plan shown, there is one wall without an opening, but the door of the adjoining wall is so close that cabinets could not be placed its entire length. The problem is nicely solved by treating each work center as an individual unit. The basic triangular relationship between the centers is maintained although it is not possible to join them by a continuous L or U shaped work counter.

The longest available wall space is used for the sink since there is more need here for working surface. There is ample working surface, however, for food preparation near the refrigerator and for serving counter next to the range.

Storage adequate for an occupancy of six persons is indicated by the 52 square feet of shelf space available in wall cabinets and the 10 lineal feet of base cabinet storage.



Kitchens with Doors Centered on the Two Ends Can Be Arranged with Units Facing Along Other Two Walls

AS CAN be seen in the sketch and floor plan of this kitchen, there are doors at both ends, the traffic lane splitting the kitchen in two and leaving only two walls available for cabinets, these walls being separated.

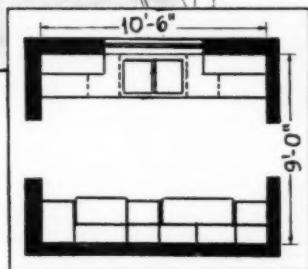
An effective step-saving arrangement is gained by placing the sink and cleaning center on one wall and the range and refrigerator on the opposite wall.

The tops of base cabinets next to the range and refrigerator serve as food preparing and serving areas. A row of wall cabinets above the range and adjoining base cabinets provides ample storage for packaged foods and cooking and serving dishes.

Storage here is adequate for a normal occupancy of six persons. Shelf space in upper wall cabinets totals 42 square feet exclusive of the tall cabinet which is placed next to the door leading to the outside. Here, it is handy for storage of foods, or clothing and implements. If used entirely for shelf storage, it would add 24 square feet, or it may be supplied for storage of brooms, mops or vacuum cleaner with three shelves (9 square feet) above. The base cabinets amount to 10½ lineal feet.



Corridor Type with Units on Two Opposite Kitchen Walls

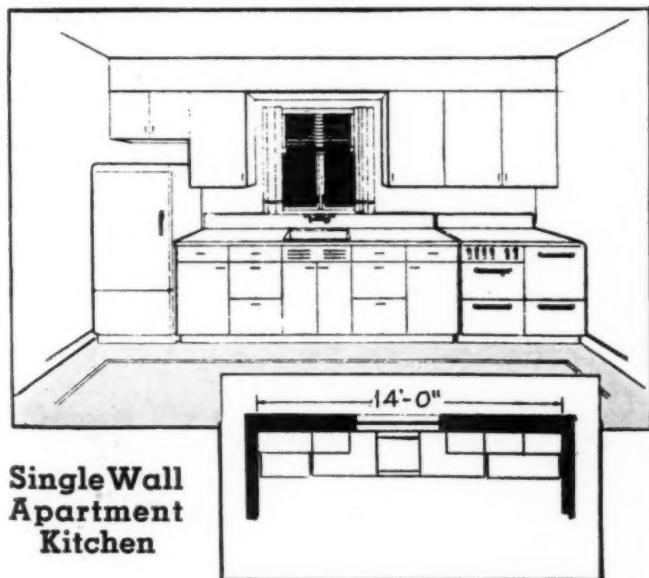


Long, Narrow Space Like Kitchenette Has Units on One Wall

WHERE the space is extremely long and narrow, or where there is only one wall relatively unbroken by windows or doorways, the arrangement above is indicated. This places all work centers in one unbroken sequence, with a continuous working counter connecting them. This may require a few more steps to move from one work center to another, but the arrangement is such that work may be done at the various work centers, moving in orderly sequence from the preparation stage, near the refrigerator and food storage cabinets to the serving center, with the cleaning operations afterward located at or near the sink. The range is thus at the opposite end of the counter from the refrigerator, near the door to the dining room. A movable table for use while serving would be a handy adjunct.

The arrangement does not permit as much upper cabinet space as would ordinarily be needed in connection with the base cabinet storage. There are 33 square feet of shelf space in the wall cabinets, 6 lineal feet of base cabinet storage. This would be enough, however, for an occupancy of three to four, possibly five, persons.

In many kitchens of this type, the opposite wall, not shown in the above floor plan, may provide space in which table and chairs may be placed.

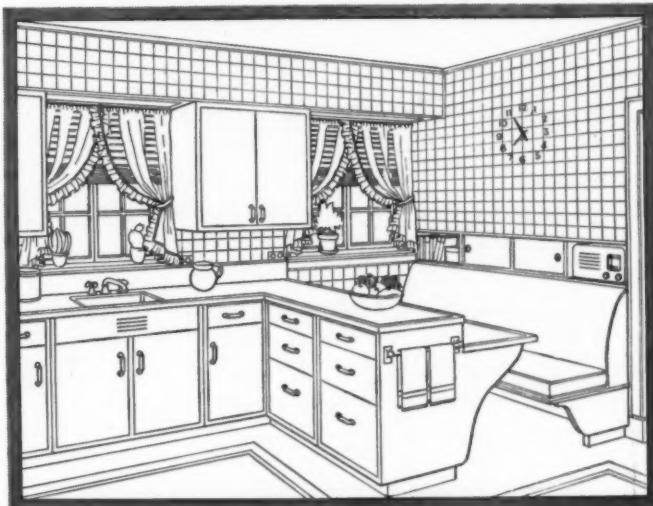


Single Wall Apartment Kitchen

MASONITE PRESWOOD TEMPTILE

... SPOTLESS LUXURY AT LOW COST

Lots of the "finishing touches" run into lots of money. But you needn't strain the budget to achieve tile-effects these days. Masonite Preswood Temptile produces truly beautiful tile-like walls for an exceptionally reasonable price. It is a hard, grainless, wood-fiber board that comes in 4 x 12 ft. pieces — already grooved. It can be installed with ordinary wood-working tools. It can be painted or enameled. And — it's *permanent*! Once it's properly applied, it will neither warp, chip, split nor crack, and there's no breakage. Illustrated here is a scheme for an interesting kitchen arrangement that can be finished for surprisingly little — using Masonite Preswood Temptile for the walls and Tempered Preswood for built-in features.



THIS PLAN FEATURES a built-in seat for breakfast, behind which are sliding shelves for the electrical equipment, a shelf for cook-books and another for a radio. The counter tops and built-in cabinets are Masonite Tempered Preswood. The walls are Preswood Temptile. Notice the electric clock mounted behind a removable panel of Preswood Temptile.



**THE WONDER WOOD OF A THOUSAND USES
SOLD BY LUMBER DEALERS EVERYWHERE**

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IF you would like to examine a sample of Masonite Preswood Temptile **FREE**, just fill in and mail this coupon to:

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111 W. Washington St., Chicago, Ill.

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SMOOTH
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IS IT!"

• There's a comfortable "feel" about this Stanley Bit Brace you'll note the minute you pick it up. Balance is just right for easy, straight driving. Other quality features include the cocobolo head and handle, the extra heavy steel bow and the strong, sturdy box ratchet. Forged steel Universal jaws hold straight shank bits from $\frac{1}{8}$ " to $\frac{1}{2}$ ", taper shanks up to Clark's No. 2 expansive bit. Ask to see the No. 923 Bit Brace at your dealer's. Write for free Stanley Tool Catalog 34.



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Nut and cotter pin lock entire chuck in place. Universal jaws are designed so they will not bend, jam, slip or come out.

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How to Paint Asbestos Siding

New York, N. Y.

To the Editor:

In the September issue of the *American Builder* we have noticed the first of a series of articles on the asbestos industry, including, naturally, data on asbestos siding.

In this office we have received numerous inquiries for the proper formulas and mixing instructions for painting asbestos shingles and clapboards. Although these materials do not need painting when first installed, some of our inquiries are concerned with the owner's desire to change his decorative styling, others where staining from flashing and other parts or dirt discoloration had taken place. In view of these requests we feel that you may be interested in the painting procedure for asbestos siding as follows:

If asbestos siding has not weathered sufficiently to neutralize alkali in the cement, wash with solution of two pounds zinc sulphate to one gallon of water. Allow to dry thoroughly before applying paint. Apply three coats of paint brushed on well to seal surface, allowing for uneven paint absorption in priming coat by the porous surface. For the priming coat use 3 parts (by volume) soft paste white lead, and 5 parts half and half mixture of raw linseed oil and lead mixing or reducing oil. Follow with body and finish coats of 3 parts white lead with 4 parts lead mixing or reducing oil. Add colors in oil to the paint as desired for any shade or tint.

LEAD INDUSTRIES ASSOCIATION,
By Richard B. Edwards.

An Aid to Future Builders

Montgomery, Ala.

To the Editor:

Can you give me information as to where I can secure a book of small duplex house plans? Kindly send me your latest book list.

We have been receiving the *American Builder*, through local lumber dealers, for a number of years. Students in our drafting classes literally wear them out, enjoying them, and we look forward each month to their arrival for fresh material and new ideas. Permit me to express my appreciation for this aid to teaching.

LANIER HIGH SCHOOL,
Department of Manual Arts,
By H. L. Weatherby.

Defense Program and Building

Detroit, Mich.

To the Editor:

We have been informed that the USHA, through its local Housing Committee, has been gathering local housing data with a view to embarking under a huge local government subsidized housing program.

That heavily overworked term "National Emergency" will be called on, no doubt, to justify further activity and growth of this bureaucratic barnacle.

But the term "National Emergency" cannot be spread widely or thickly enough to cover the fact, that local private building industry is amply prepared to take care of any housing need which may arise, due to industrial expansion for the production of war materials.

Nor will it be able to dim the fact that skilled industrial workers will be paid a wage which will put them beyond the need of government subsidies in housing, a fact which must be obvious to anyone but a bureaucrat, so entirely and unconsciously immersed in the current milk and honey governmental appropriations flood, as to be completely isolated from both reason and logic.

The Defense Program is set up to preserve our present system of Democracy. One of the important supporting pillars of that Democracy is intelligently regulated Private Enterprise.

It is important to the safety and success of that Program, that

undermining bureaucratic Fifth Columnists be suppressed as ruthlessly as any other type.

And any Bureaucracy which masses its heavy appropriation artillery for an attack on any branch of industry which is doing its job efficiently, is creating an unnecessary and dangerous disturbance which should be classed as the worst type of Fifth Column Activity.

Government has called upon Labor and Industry to put their houses in order. Perhaps it would not be amiss at this time, to ask Government to check its closets and corners for a bit of overlooked dust and grime.

W. J. GUINAN, Executive Director,
Builders Association of Metropolitan Detroit.



Nice Looking Job

State Center, Ia.

To the Editor:

I am enclosing a picture of a new home (above) that I recently completed; the plan was found in your September, 1938, issue. Enclosed is my check for \$2.00 for a year's subscription to the *American Builder*.

CLARENCE SCHULER.

"Fair" House But Not a Fair Price

Minneapolis, Minn.

To the Editor:

One of our dealers in Minnesota visited our office a short time ago and at that time we discussed small home costs. This dealer referred to a house which appeared in your June issue for 1940 on page 47, namely, the \$3,100 house for the typical American family which is on display at the New York World's Fair.

The cost as published, namely \$3,100, is certainly 'way too low even on the basis of prices before recent price advances. In this particular locality this house came to about \$4,700 which is \$1,600 over the published price. The fact that the prospect had picked this design out himself before consulting the lumber dealer and had this \$3,100 price fixed in his mind made it very embarrassing for our dealer as the prospect thought that he was being overcharged when quoted a price of \$4,700.

Roughly figuring this house on a cubic footage basis and assuming the house to contain about 16,000 cubic feet, we arrived at a cubic foot cost of less than 20 cents. This is out of line for a home of this kind with hot water heat, a fireplace, and standard medium grade equipment.

In fairness to the *American Builder* magazine, we know that the costs were not determined by your staff and, therefore, you are not in any way responsible but we do think it would be well to watch the publication of such cost figures very carefully in order to prevent misunderstandings by the buying public.

We thought it advisable to write you regarding this situation as it might assist you in determining the course to follow in publishing information as to cost of new designs which will appear from time to time in the *American Builder*. You are doing a splendid job in the publishing of the designs, articles, and miscellaneous information important to the builder and lumber dealer. We know full well how hard it is to please everyone. We also know how difficult it is to publish any cost figures without someone saying that they are either too low or too high.

NORTHWESTERN LUMBERMENS ASSOCIATION,
By D. J. C. Parsons, Architectural Dept.
(Continued to page 88)

High Priced Homes Deserve TILE-TEX Low Cost Homes Need It!



Tile-Tex Floors and Walls in a Modern Kitchen

YOUR higher-priced home prospect expects quality . . . he expects to find the beauty, color and permanence that only resilient Tile-Tex floors and decorative Tile-Tex walls give to the modern home.

The prospect for your "low cost" home compares your house with others by the extras you can offer. Inexpensive Tile-Tex walls and floors in the bath and kitchen give that plus value that clinches the sale.

Installed easily and quickly . . . inexpensive to maintain . . . Tile-Tex products are visible sales aids to any home. Baths, kitchens, recreation rooms and laundries, with Tile-Tex walls and floors, have real sales personality . . . they emphasize the value and quality of the home you have to sell.

The results of remodeling with Tile-Tex are fascinating and satisfying, yet it is inexpensive and simple to install right over old floor surfaces.

There is a Tile-Tex Approved Contractor near you who can give you a fact-filled story on Tile-Tex . . . backed with his own installations. Write for his name and ask for copies of the new Tile-Tex folders on floors and walls.

TILE-TEX Company CHICAGO HEIGHTS ILLINOIS

OR YOU MIGHT CARE TO REPRESENT US IN YOUR TERRITORY

The Tile-Tex Company,
Chicago Heights, Illinois

If my territory is open, I would like to have complete information on the Tile-Tex Dealer's proposition.

Name

Address

A-11

"Knotty Pine On The Walls—Is Money In The Bank"



... says Mr. Milo Gonser, enterprising builder of Detroit, Mich. "A 50% increase in my business is directly due to the attractive appearance of rooms finished in knotty pine." Gonser built homes are not only good looking, they are built to last—another reason why they sell so fast. Mr. Gonser uses the Western Pines for exterior and interior trim, built-in fixtures, doors, sash, window frames, screens, shutters, and framing.

THE WESTERN PINES WILL DO YOUR NEXT JOB BETTER—TRY THEM

Western Pine Association, Yeon Building, Portland, Oregon

*Idaho White Pine

*Ponderosa Pine

*Sugar Pine

*THESE ARE THE WESTERN PINES

LETTERS—

Preparedness?

New York, N.Y.

To the Editor:

I will appreciate it if you will please inform me if you have a book of instructions as to how to build "bombproof shelters" which may soon be popular.

If you don't have a book that may give one some idea of this class of buildings, perhaps you may be able to recommend some company either in this country or England who publishes one.

WILLIAM J. BENKO.

Likes "Security" Material

Red Bank, N.J.

To the Editor:

Are you going to have any reprints of pages 38 and 39, "The Best Investment You Can Make," of your October issue? If so, and you are going to also include pages 40 and 41 and the block on page 47 regarding chiseling, sub-standard products, etc., our members may be interested. My first choice would be pages 38 and 39. You have done a good job. Please quote reprints in 100 lots and 1,000 lots and I will see what they want to do.

E. H. CHRISTY, Secretary,
Material Men's Club.

Another Reaction to September Editorial

Palm Beach, Fla.

To the Editor:

Kindly advise if you have any reprints of your editorial, "Business Under the New Deal," by Samuel O. Dunn in the *American Builder* of September, 1940. I consider this one of the best arguments in favor of changing over from the New Deal policies which I have read, and should appeal to any businessman.

Please advise if these are available and the cost of same.

HARRY R. CORWIN & CO., Inc., Building Construction.
By H. R. Corwin.

WILSON LEADS WITH A NEW DEALER HELP



Wilson Precision-Bent Sink Rims, flat-top or drop-type, are now grouped by size at two list prices only. Nos. 23, 24, 24-A, 25 and 25-B, in sizes up to and including 21"x32", \$2.20 ea. in lots of 12 or more; larger than 21"x32", up to and including 21"x42", \$2.70 in lots of 12 or more. Other prices on request.

FREE Ask for new 8-page folder, "Details of Linoleum Covered Sink Top Construction."

Wilson

METAL PRODUCTS CO., COLUMBUS, O.

FOR MEN WHO USE PORTLAND CEMENT AT TEMPERATURES BELOW 50° F.

YOU KNOW the effects that *freezing* temperatures have on concrete. But are you aware of these facts:

1. Temperatures above freezing—even as high as 50° F.—seriously affect the strength of concrete.
2. Solvay Calcium Chloride in the mix produces a remarkable increase in early strength, *particularly at lower temperatures . . . increases final strength 7 to 12%.*
3. Calcium chloride provides extra cold weather protection—shortens protection period—cuts cost of labor, heaters, fuel and canvas.
4. Calcium chloride accomplishes uniform curing—makes the mix more workable, thus producing denser, more waterproof concrete.
5. Does all this *without changing the normal chemical action of the portland cement.*
6. Results of tests by the National Bureau of Standards, Portland Cement Association, American Road Builders Association, and Highway Research Board are contained in our 48 page book "Calcium Chloride and Portland Cement."

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use **SOLVAY CALCIUM CHLORIDE**
with all
PORTLAND CEMENTS

SOLVAY SALES CORPORATION
40 Rector Street New York, N. Y.

Gentlemen: Kindly send me a free copy of your booklet "Calcium Chloride and Portland Cement."

Name.....

Affiliated with.....

Address.....

City..... State..... 34-1140

TruCost Figures—

(Continued from page 89)

Opgs., 14 opgs.; Windows and Casements, 24 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .75 sqs.; Porch Ceilings, .50 sqs.; Porch Beam, 16 lin. ft.; Porch and Balcony Post and Newels, 2; Porch Cornice, 16 lin. ft.; Picket Fence, 26 lin. ft.

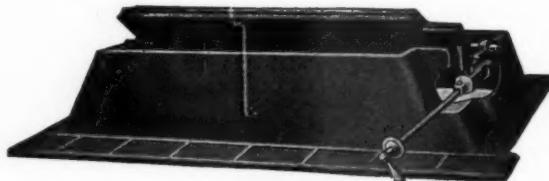
Page 45, November: Hunter, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 126 lin. ft.; Trench Walls, 60 lin. ft.; Basement Floor, 880 sq. ft.; Garage Floor, 170 sq. ft.; Excavation per ft. deep, 38 cu. yds.; Outside Walls, 17.25 sqs.; First Floor, 8.80 sqs.; Second Floor, without fin. flg., 5.00 sqs.; Ceiling, 9.50 sqs.; Roof Pitch, 10" rise per ft. run; Roof, 14.35 sqs.; Hips and Valleys, 40 lin. ft.; Cornice, C & F, 200 lin. ft.; Partitions, 132 lin. ft.; Inside Finish OS Walls, 126 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 14 opgs.; Windows and Casements, 15 opgs.; Chimney, 32 lin. ft.; Main Stairs, 1; Porch Floor, 1.00 sqs.; Porch Ceilings, .90 sqs.; Porch Beam, 20 lin. ft.; Porch and Balcony Post and Newels, 4; Porch Roof, 1.18 sqs.; Porch Cornice, 22 lin. ft.

Page 46, November: Hunter, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 128 lin. ft.; Trench Walls, 66 lin. ft.; Basement Floor, 800 sq. ft.; Garage Floor, 170 sq. ft.; Excavation per ft. deep, 34 cu. yds.; Outside Walls, 20.50 sqs.; First Floor, 8.00 sqs.; Second Floor, without fin. flg., 4.00 sqs.; Ceiling, 9.70 sqs.; Roof Pitch, 10" rise per ft. run; Roof, incl. Porch, 10.00 sqs.; Hips and Valleys, 20 lin. ft.; Cornice, incl. Porch, C & F, 175 lin. ft.; Partitions, 130 lin. ft.; Inside Finish OS Walls, 128 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 13 opgs.; Windows and Casements, 15 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1;

Whether you are building the "House of Tomorrow" or a modest bungalow—be sure to install a Peerless Fireplace Damper.



Your assurance of perfect fireplace operation.

Write for free descriptive booklet "Tomorrow's products for Today's homes"

**PEERLESS
MANUFACTURING CORPORATION
LOUISVILLE, KENTUCKY**

Porch Floor, .96 sqs.; Porch Ceilings, .96 sqs.; Porch Beam, 20 lin. ft.; Porch and Balcony Post and Newels, 5.

Page 47, November: Barrows, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 200 lin. ft.; Heater Rm. Floor, 25 sq. ft.; Garage Floor, 200 sq. ft.; Excavation per ft. deep, 33 cu. yds.; Outside Walls, 18.00 sqs.; First Floor, 7.50 sqs.; Ceiling, 9.50 sqs.; Roof Pitch, 7" rise per ft. run; Roof, 12.00 sqs.; Cornice, C & F, 200 lin. ft.; Partitions, 112 lin. ft.; Inside Finish OS Walls, 112 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 12 opgs.; Windows and Casements, 12 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 26 lin. ft.; Porch Floor, 1.00 sqs.; Porch Ceilings, .80 sqs.; Porch Beam, 26 lin. ft.; Porch and Balcony Post and Newels, 2; Porch Roof, 1.28 sqs.; Porch Cornice, 32 lin. ft.

Page 48, November: Barrows, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 158 lin. ft.; Laundry & Heater Room Floor, 100 sq. ft.; Garage Floor, 200 sq. ft.; Excavation per ft. deep, 28 cu. yds.; Outside Walls, 18.00 sqs.; First Floor, 5.70 sqs.; Second Floor, with fin. flg., 5.00 sqs.; Second Floor, without fin. flg., .75 sqs.; Ceiling, 10.70 sqs.; Roof Pitch, 10" rise per ft. run; Roof, 12.40 sqs.; Hips and Valleys, 10 lin. ft.; Cornice, C & F, 175 lin. ft.; Cornice, 4", 88 lin. ft.; Partitions, 175 lin. ft.; Inside Finish OS Walls, 196 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 13 opgs.; Windows and Casements, 16 opgs.; Chimney, 28 lin. ft.; Main Stairs, 1; Picket Fence Rail, 42 lin. ft.

Page 49, November: Barrows, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE. Basement Walls, 76 lin. ft.; Trench Walls, 120 lin. ft.; (Continued to page 92)

5 EXTRA VALUES
at No Extra Cost

That's What
You Get
in
Rō-WAY
OVERHEAD TYPE
DOORS

1

"Crow's Foot" Outer Bearing Support—Rigidly holds the chain sheave wheel in permanent alignment. No twist . . . no sag to cause friction.

2

"Ro-To Live" Spring—A powerful Floating Torsion Spring (used on some models), gives perfect balanced lifting power, and ends side-drift and binding.

3

"Zip-Lock" Adjustment—Used on Ro-Way Doors having Twin Torsion Spring Power. Permits instant easy adjustment of spring tension.

4

"Tailor Made" Spring—Each spring is individually made for the Ro-Way Door on which it is used. Each is power-metered to the weight of the door.

5

Parkerized and Painted Hardware—Ro-Way Hardware and Tracks are given finest known protection against rust and corrosion . . . same method as used on fine motor cars, refrigerators, etc.

Authorized Distributors in all Principal Cities will give you prompt service on Extra Value Ro-Way Doors for Residential, Commercial and Industrial uses.

Write for Ro-Way Door Folders, Prices and complete information

ROWE MANUFACTURING CO.
706 Holton Street • Galesburg, Ill., U.S.A.

"There's a Rō-WAY for Every Door Way"

MAKE BIG MONEY

SURFACING FLOORS

American Floor Sanders are making big money for a lot of men (we'll send you their names and pictures). There is no reason in the world why you shouldn't also be making this big money.

BE OWN BOSS

You already know a lot about the building game and this is a real chance to get into something for yourself and be your own boss.

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American floor sanders are easy to run. There is no hand scraping the American way and no skill required—in fact, inside of a few hours you can run one as well as an "old timer." American Sanders are easy to take from job to job and you don't need any helpers.

Sometime during every man's life he has to decide whether to go ahead and "be somebody" or stay in the same old rut.

GET DETAILS

Find out more about this interesting money-making work today by signing and sending in the coupon below for free details.

RETURN COUPON BELOW



AMERICAN FLOOR SURFACING MACHINE COMPANY

511 SO. ST. CLAIR ST.

Gentlemen:

Send complete details and prices without cost.

I want to go into floor surfacing business.

I would use sander in my contracting business.

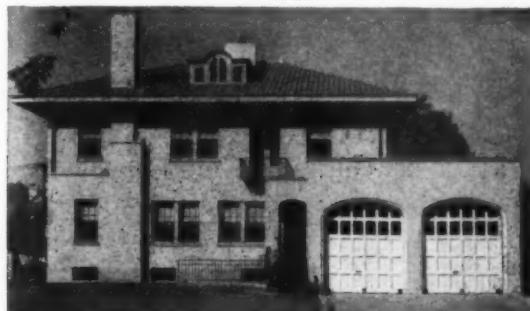
Name

Street

City

State

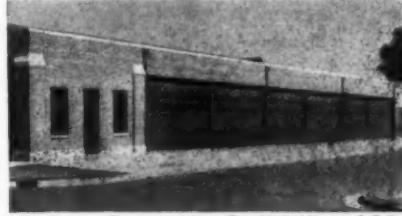
TOLEDO, OHIO



Ro-Way Garage Doors with curved top section, with interesting glass arrangement.



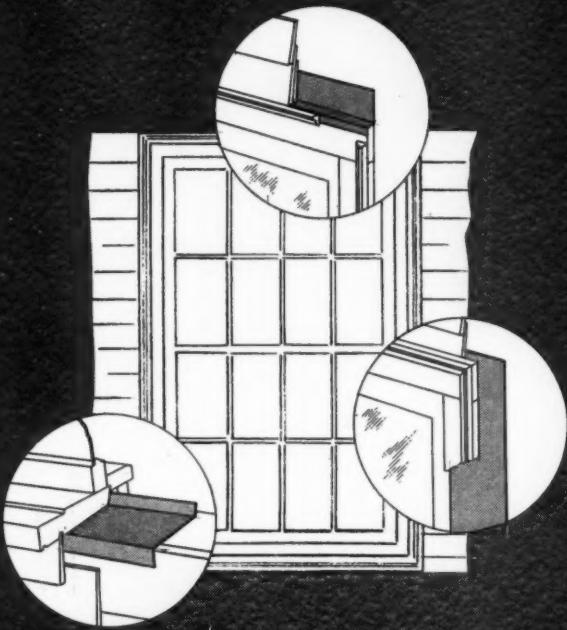
2 Ro-Way "High Lift" Doors used in this attractive Conoco Filling Station.



Burlington Transportation Co. (Subsidiary of C.B. & Q.R.R.) uses 13 Heavy Duty Ro-Way Doors in this new building.

Best by Test!

for Concealed Flashing



Anaconda "Electro-Sheet" Copper, bonded to building papers, fabric or asphaltic compounds, gives concealed flashing the durability of copper at remarkably low cost. Extremely flexible and easy to install, these materials are available in rolls of various lengths, and in widths up to 60"—with the copper in thicknesses of .0013", .0027" and .004" (1 oz., 2 oz. and 3 oz. per square foot).

Examine Reinforced "Electro-Sheet" products for yourself. Just ask for free samples and names of manufacturers.

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General Offices: Waterbury, Connecticut
In Canada: Anaconda American Brass Ltd., New Toronto, Ont.
Subsidiary of Anaconda Copper Mining Company

TruCost Figures—

(Continued from page 91)

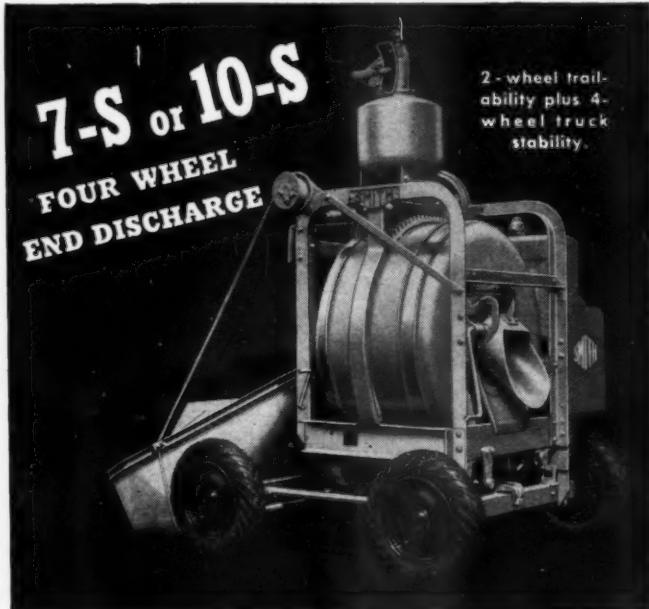
Basement Floor, 330 sq. ft.; Excavation per ft. deep, 32 cu. yds.; Outside Walls, 14.00 sqs.; First Floor, 7.68 sqs.; Second Floor, without fin. flg., 5.00 sqs.; Ceiling, 7.68 sqs.; Roof Pitch, 10" rise per ft. run; Roof, 11.00 sqs.; Hips and Valleys, 12 lin. ft.; Cornice, C & F, 130 lin. ft.; Cornice, 4", 90 lin. ft.; Partitions, 112 lin. ft.; Inside Finish OS Walls, 112 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 13 opgs.; Windows and Casements, 15 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 1.24 sqs.; Porch Ceilings, 1.14 sqs.; Porch Beam, 34 lin. ft.; Porch and Balcony Post and Newels, 3; Porch Roof, 1.84 sqs.; Porch Cornice, 42 lin. ft.

Page 56. November: Will, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 110 lin. ft.; Trench Walls, 60 lin. ft.; Basement Floor, 700 sq. ft.; Excavation per ft. deep, 30 cu. yds.; Outside Walls, 20.00 sqs.; First Floor, 7.00 sqs.; Second Floor, with fin. flg., 7.00 sqs.; Ceiling, 14.00 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 10.88 sqs.; Cornice, C & F, 130 lin. ft.; Cornice, 6", 130 lin. ft.; Partitions, 136 lin. ft.; Inside Finish OS Walls, 220 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 13 opgs.; Windows and Casements, 20 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 1.60 sqs.; Porch Ceilings, 1.60 sqs.; Porch Beam, 50 lin. ft.; Porch and Balcony Post and Newels, 15; Porch Roof, 3.00 sqs.; Porch Cornice, 64 lin. ft.; Porch and Deck Rail, 33 lin. ft.

Page 57. November: Will, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 110 lin. ft.; Trench Walls, 66 lin. ft.; Basement Floor, 720 sq. ft.; Excavation per ft. deep, 31 cu. yds.; Outside Walls, 17.00 sqs.; First Floor, 7.20 sqs.; Second Floor, with fin. flg., 7.20 sqs.; Ceiling, 14.40 sqs.; Roof Pitch, 7" rise



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Here's a lightweight mixer that gives you all the speed you want — to the job or on the job. Compact 5 ft. wheel-base, automotive steering, spring mounting, pneumatic-tired wheels and balanced weight permit high towing speeds. Engine mounted on curb side of mixer. Low overall width. No overhang on traffic side. Works in narrow places. Other sizes 2 1/2-S to 112-S. Write for bulletin.

THE T. L. SMITH COMPANY
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SMITH MIXERS
THE BOULDER DAM MIXERS

per ft. run; Roof, 16.00 sqs.; Cornice, C & F, 175 lin. ft.; Cornice, 6", 72 lin. ft.; Partitions, 152 lin. ft.; Inside Finish OS Walls, 220 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 16 opgs.; Windows and Casements, 26 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 1.92 sqs.; Porch Ceilings, 1.20 sqs.; Porch Beam, 33 lin. ft.; Porch and Balcony Post and Newels, 6; Porch Roof, 1.80 sqs.; Porch Cornice, 39 lin. ft.; Porch and Deck Rail, 8 lin. ft.

Page 59, November: Freeman, Archt.

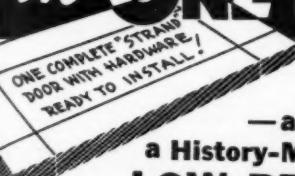
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 250 lin. ft.; Trench Walls, 60 lin. ft.; Basement Floor, incl. Garage, 1500 sq. ft.; Excavation per ft. deep, 65 cu. yds.; Outside Walls, 22.00 sqs.; First Floor, 14.30 sqs.; Second Floor, with fin. flg., 6.00 sqs.; Second Floor, without fin. flg., 1.50 sqs.; Ceiling, 20.30 sqs.; Roof Pitch, 12" rise per ft. run; Roof, 21.00 sqs.; Hips and Valleys, 325 lin. ft.; Cornice, C & F, 250 lin. ft.; Cornice, 4", 175 lin. ft.; Partitions, 325 lin. ft.; Inside Finish OS Walls, 300 lin. ft.; Front and OS French Doors, 3 opgs.; Rear and Grade Doors, 3 opgs.; Garage Door 8 ft. wide, 2; Inside Doors and Cased Opgs., 40 opgs.; Windows and Casements, 31 opgs.; Chimney, 30 lin. ft.; Main Stairs, 1; Porch Floor, 2.50 sqs.; Porch and Deck Rail, 56 lin. ft.

* * *

Oil Burner Exhibition Planned

SPACE reservations can now be made for the Oil Burner Institute's National Oil Burner Progress Exhibition to be held at the Commercial Museum, Philadelphia, March 17 through 22 next. In announcing the general opening of space, C. F. Curtin, secretary of the Institute, has urged manufacturers of oil burners, manufacturers of oil burning accessory equipment, including air conditioning, fuel oil companies and other eligible exhibitors to be sure to engage sufficient booth space early by communicating with him at 30 Rockefeller Plaza, New York City.

Now Shipped in ONE PACKAGE



— and
a History-Making
LOW PRICE

Space saved — easy handling — assembled on the job in 12 minutes with only a hammer — quick installation with a wrench, hammer and level. These tremendous advantages, plus its amazing ease of operation and SENATIONAL, LOW PRICE are giving the Strand Door commanding leadership!

Ask Your Dealer

Get the low-down on this revolutionary garage door. Profit from its sweeping, nationwide demand. Ask your dealer or write for literature and details.

STRAND BUILDING PRODUCTS CO.
234 No. Woodward . . . Birmingham, Mich.

STRAND DOOR

ONE-PIECE OVERHEAD TYPE



**Easy
To Stock**

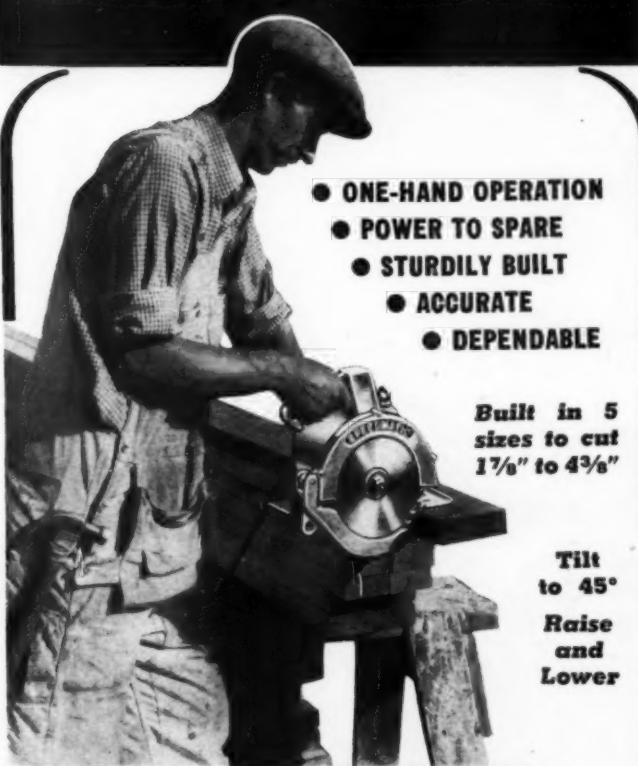
**Easy
To Sell**

**Easy
To Install**

Yours for **SPEED**

Speedmatic

—FASTEST CUTTING SAWS YOU CAN BUY!



- ONE-HAND OPERATION
- POWER TO SPARE
- STURDILY BUILT
- ACCURATE
- DEPENDABLE

Built in 5
sizes to cut
1 1/8" to 4 3/8"

Tilt
to 45°
Raise
and
Lower

"Do it fast, do it right" is SPEEDMATIC's record. That is why thousands of builders the country over are turning to SPEEDMATIC. You, too, will turn "SPEEDMATIC" once you try it on your toughest jobs of cutting wood, tile and other materials. You will see why it is the best saw buy on the market today. Ask for free demonstration.

AGENCIES: 267 Lafayette St., NEW YORK . . 7 Terrace, BUFFALO . . 192 Brighton Ave., BOSTON . . 1303 Girard Ave., PHILADELPHIA . . 2414-30th St., WASHINGTON . . 4016 St. Clair Ave., CLEVELAND . . 14 Smith St., DETROIT . . 737 South Western Ave., CHICAGO . . 1622 N. 12th, MILWAUKEE . . 621 Ft. Wayne Ave., INDIANAPOLIS . . 3530 Lawton Blvd., ST. LOUIS . . 101 Forrest Ave., ATLANTA . . 1000 Tchoupitoulas St., NEW ORLEANS . . 4543 Bryan, DALLAS . . 101 Main St., HOUSTON . . 1421 Seventeenth St., DENVER . . 2031 Santa Fe, LOS ANGELES . . 269 Seventh St., SAN FRANCISCO . . 1743 First Ave., SEATTLE. Canadian: 73 Adelaide, TORONTO . . 10421 St. Hubert, MONTREAL. In other cities consult telephone directory.

**INCREASE
YOUR PROFIT
on each
job!**

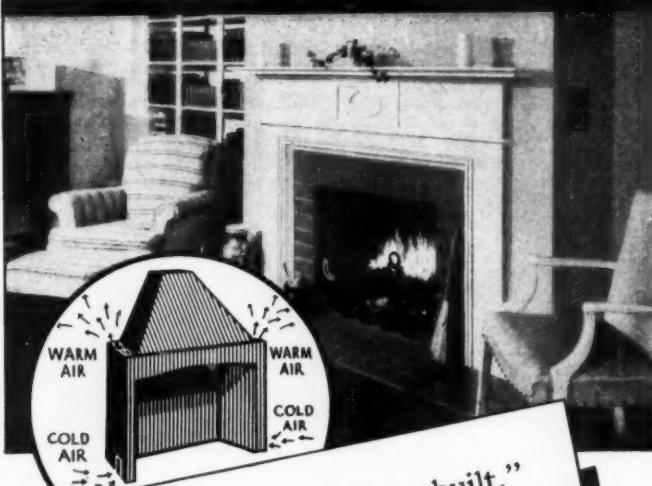
Sand floors the quick, money-making way with SPEEDMATIC Floor Sanders. Cut with surface speed of 2825 ft. per minute. Smoother, cleaner, easier. Write for details.

PORTER-CABLE MACHINE CO.

1721-11 No. Salina St., Syracuse, N. Y.

Representatives in principal cities in U.S.A.

EASIER to BUILD



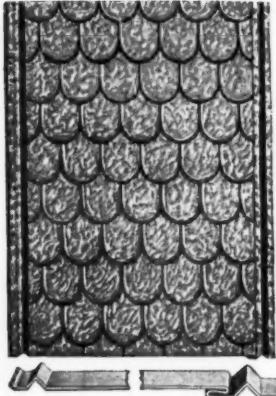
"Best fireplace I ever built," say thousands of builders. "Saves time and materials—will not smoke."

CIRCULATES HEAT

Write for complete information
HEATILATOR COMPANY
5111 E. Brighton Ave., Syracuse, N. Y.

HEATILATOR Fireplace

EDWARDS
REO
CLUSTER
SHINGLES
ARE CONSISTENT
MONEY MAKERS
FOR
DEALERS
and
CONTRACTORS



The same features that made Reo Shingles so popular forty odd years ago still give them a big competitive advantage today. Reo Steel Shingles have full length interlocking seams, wide flanges with nail holes covered and extra quality galvanizing. They protect from fire, lightning and weather. They are easy to install. Yet they present the handsome appearance of individual shingles and they cost less. The profit margins for dealers and contractors are liberal. Write for Catalog No. 95.

THE EDWARDS MANUFACTURING CO.

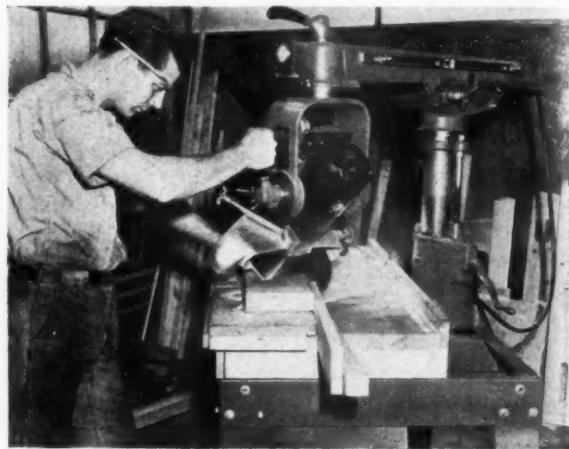
542-562 Eggleston Avenue

Cincinnati, Ohio

\$265 Sawed Off (Continued from page 61)

"Besides saving, we find all cuts uniform lengths, square and smooth. A measuring stick laid out by foreman is kept on radial saw at all times and pieces cut ganged up for maximum number of pieces cut at one time.

"We are now using radial saw on smaller jobs with approximately 7,000 ft. of framing material and find our cutting is reduced to about 8 hrs. for 1 man, with the



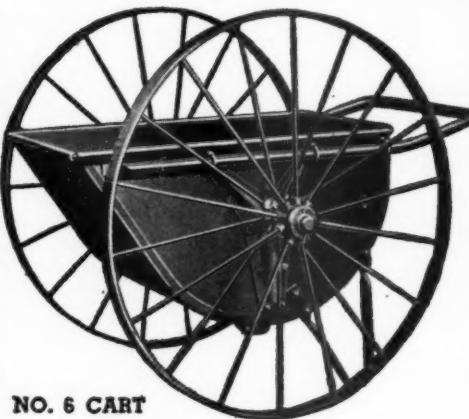
MITERING and (at right) shaping with the radial saw.

same uniformity in cuts saving much in dollars and cents."

Strother has an unusual setup in that he also operates the Mattawan Builders' Hardware Co., handling an extensive line of builders' hardware and specialties. In the

Sterling CONCRETE CARTS

PLAIN OR ROLLER BEARINGS



NO. 6 CART

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Tray is 12 Gauge — 6 Cubic Feet Capacity. Wheels 42 Inches Diameter. Flat or Oval Tires, with Plain or Roller Bearings. Trunnion Axles.

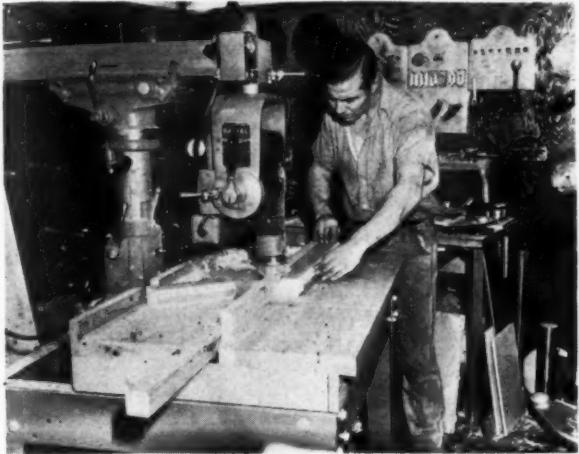
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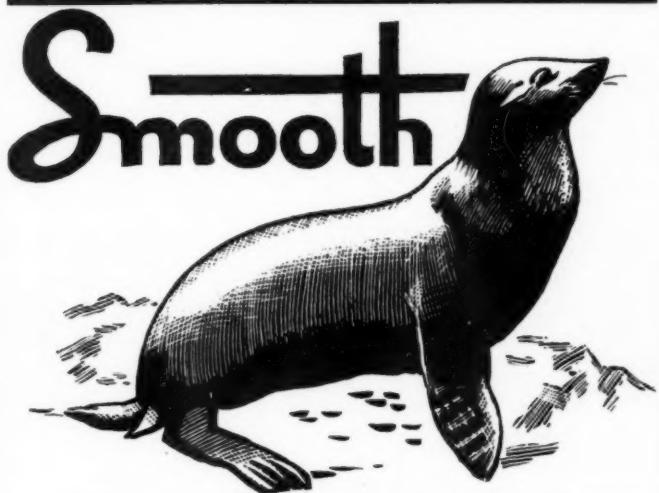
rear of his hardware store he maintains his shop and supply of lumber and materials. With the complete equipment available in this shop Strother is able to turn out practically any kind of trim and millwork required in the average residential and commercial building. The modern woodworking equipment is so versatile that he is able to turn out his own millwork at very reasonable costs, and this branch of the business proves an important part of his building construction work.

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(Continued to page 96)

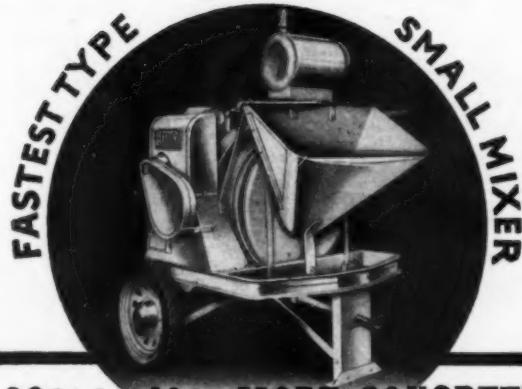


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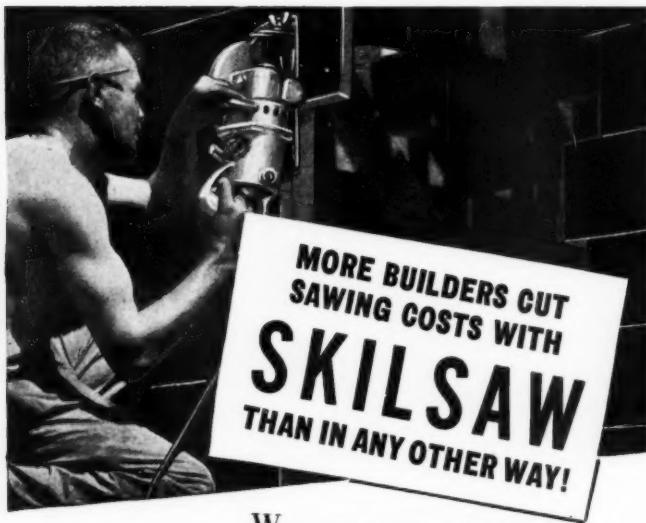
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\$265 Sawed Off

(Continued from page 95)

etc. He has turned out some very attractive tavern bar layouts with his woodworking equipment—another profitable type of business. Strother's experience is an excellent illustration of the fact that the builder who is equipped in a practical and sensible manner, with a moderate price, with efficient modern power equipment is in a position to profit by the current expansion in construction.

* * *

Shop Built Panels

(Continued from page 46)

cent to the present site and a substantial financial backing which indicates that it plans to be in business there for many years. Aside from the construction angle, the handling of Radrock Estates has also been commendable. Architect R. C. Hunter, who is well known in the residential field, has designed an unusual collection of attractive homes. The site has been artistically laid out with curved streets and well placed houses. In fact, it is a project well worth watching as one of the outstanding residential developments of the country.

A brief list of the quality materials and equipment used include the following:

HEATING—Sunbeam gas-fired winter air conditioning units by American Radiator Co.

PLUMBING—W. A. Case and Son, Buffalo, N.Y.

WINDOWS—Croft steel windows, complete with operators and screens, by Croft Steel Windows, Inc., Jersey City, N.J.

FOUNDATIONS—10" concrete block with waterproof cement plaster and tar coat.

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INSULATION—Kimsul blanket-type insulation by Kimberly-Clark Co.

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PAINT—Pure white lead and oil.

WINDOW GLASS—Double-thick Libbey-Owens-Ford.

KITCHEN RANGE—Magic Chef.

LINOLEUM IN KITCHEN AND BATHROOM—Armstrong.

MEDICINE CABINETS—Ketcham and Miami.

* * *

How to Lay Linoleum

(Continued from page 75)

places. If the cement is dusty, it should be swept with a size or filler.

The alkali on all concrete floors should be neutralized by applying an inexpensive mixture of $\frac{3}{4}$ pound of zinc sulphate in ten quarts of water. This, at the same time, will settle the dust. If the concrete is covered with a good, single coat of paint, it should be scored with a wire brush. Varnish, oil, wax and grease should be removed by scrubbing with a strong solution of trisodium phosphate or, if necessary, by scraping and sanding until it is thoroughly clean.

The same recommendations should be followed in working with terrazzo, marble and ceramic tile subfloors. In addition, these

(Continued to page 98)



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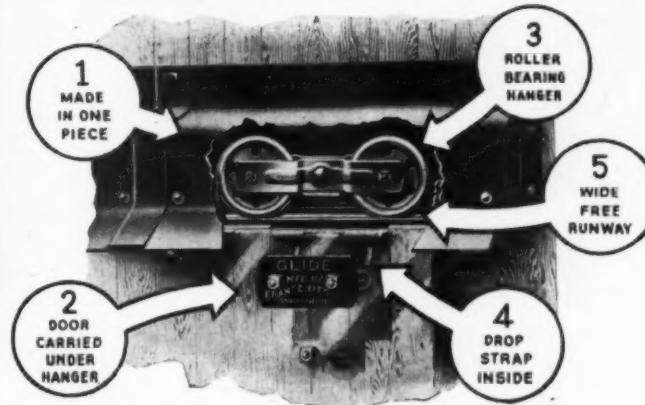


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WRIGHT RUBBER TILE

(Continued from page 97)

materials must be thoroughly machine-scrubbed with soapy water and clean, sharp sand.

Magnesite floors are slow drying and quite often old ones are structurally weak. Before laying linoleum over magnesite, it is advisable to send a complete description of the condition to the floor covering manufacturer for job recommendation.

In general, linoleum makes an extremely satisfactory flooring for homes or commercial establishments, and complete satisfaction is virtually assured if conditions governing the subfloors are followed according to exact specifications.

* * *

National Defense Program

(Continued from page 38)

Defense Housing Coordinator C. F. Palmer has estimated that from 160,000 to 200,000 housing units will be needed for defense housing. Of this \$700,000,000 program, more than half will be done by private enterprise. In its early stages defense housing consists of housing for families of Army and Navy personnel, and for civilian employees of the Army and Navy. Of the first Army allocation of \$45,762,500 announced October 7 for some 13,000 dwelling units, practically all were at army posts and airports to house the married Army personnel. Congress has limited the amount that may be spent to \$3,500 per unit.

Next in importance in the defense housing program are dwellings for civilian defense workers in industrial plants where private enterprise is unable to supply housing. There is a need for housing of this type, for example, in a region where a new munitions or powder plant is erected. This type of defense plant is frequently located away from established communities, and private industry can hardly be expected to erect housing for such workers, whose jobs may not be permanent.

An interesting angle in connection with the legislation permitting the defense housing was the fashion in which Congress apparently went out of its way to keep this work out of the hands of USHA. Congress refused to provide additional sub-

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of American Builder and Building Age published monthly at Chicago, Ill., for Oct. 1, 1940.

State of Illinois **Ill.**
County of Cook **Ill.**

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Bernard L. Johnson, who, having been duly sworn according to law, deposes and says that he is the Editor of the American Builder and Building Age and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 357, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Simmonds-Boardman Publishing Corp., 105 W. Adams St., Chicago, Ill.; Editor, B. L. Johnson, 105 W. Adams St., Chicago, Ill.; Managing Editor, R. E. Sangster, 105 W. Adams St., Chicago, Ill.; Business Manager, Robert H. Morris, 105 W. Adams St., Chicago, Ill.

2. That the owners are: Simmonds-Boardman Publishing Corporation, 30 Church Street, New York, N.Y.; Stockholders are 1 per cent or more of the total amount of stock are: I. R. Kerfoot, 15 Hillcrest Dr., Pelham Manor, N.Y.; P. A. Lee, Hopatcong, N.J.; Henry Lee, Hopatcong, N.J.; E. G. Wright, 398 N. Walnut Street, E. Orange, N.J.; S. O. Dunn, 105 West Adams Street, Chicago, Ill.; C. E. Dunn, 3500 Sheridan Blvd., Chicago, Ill.; L. B. Sherman, 575 Sheridan Road, Winnetka, Ill.; Mae E. Howson, 105 West Adams Street, Chicago, Ill.; B. L. Johnson, 6949 Bennett Avenue, Chicago, Ill.; Spencer Trask & Company are: Edwin M. Bulkley, Walnut Street, Englewood, N.J.; Acosta Nichols, Cold Spring Road, Oyster Bay, N.Y.; Cecil Barret, Carlyle Hotel, New York, N.Y.; Everett Bacon, 16 Erwin Park, Montclair, N.J.; F. Malbone Blodget, 65 Patterson Ave., Greenwich, Conn.; Arthur H. Gilbert, 440 Park Ave., New York, N.Y.; Henry S. Allen, 407 Highland Ave., Orange, N.J.; William Kurn Beckers, South Salem Road, Poundridge, N.Y.; Edwin M. Bulkley, Jr., 21 Sturgis Road, Bronxville, N.Y.; J. Taylor Foster, Parsonage Lane, Greenwich, Conn.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

BERNARD L. JOHNSON, Editor.
Sworn to and subscribed before me this 27th day of September, 1940.

(SEAL)

ANNE A. BOYD.

(My commission expires Dec. 10, 1943.)

sides for USHA. As finally approved, the defense housing program is largely in the hands of Administrator John M. Carmody of the Federal Works Administration. He is empowered to carry out the housing program through Federal or private agencies best suited to the job. Thus the USHA local housing authorities may be called upon in certain areas to handle defense housing.

However, the first large volume of work allocated was placed through the Public Buildings Administration under the direction of Commissioner W. E. Reynolds. Carmody may call on PWA, WPA or any other government agency to co-operate in the defense housing. A complete statement on the operation of the defense housing program is given on page 39 by Housing Coordinator C. F. Palmer.

Industrial Construction Rushed

Far reaching in the economic effect on the nation is the vast industrial building program that has taken place in connection with industries expanded by the national defense program. Among the industrial structures that are being rushed to completion are new airplane plants and additions to old ones, machine tool plants, ammunition and powder works and additions to numerous structures in steel and metal working industries.

A striking example of the speed with which this type of work is being rushed to completion is the record recently hung up by the Turner Construction Co. of New York. This firm recently completed a 640' x 280' addition to the Pratt & Whitney Aircraft Works at East Hartford, Conn., in 40 actual working days, or less than two calendar months. This structure, which was designed by Albert Kahn, had a total of 187,000 sq. ft. of floor space, equivalent to about 4½ acres, and required some 1,100 tons of structural steel.

In work of this kind, both government and private employers have been calling on experienced and qualified firms capable of getting quick action and at the same time turning out an exacting job. Turner has also built in record time a 175' x 100' machine shop for the Bullard Co. of Bridgeport, Conn., machine

(Continued to page 100)

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National Defense Program

(Continued from page 99)

tool manufacturers, and a 360' x 94' foundry for the same firm. This firm is engaged in building a 610' x 80' addition to the Hamilton Standard Propeller Co., is one of a group of contractors engaged in important naval and air bases, and is the contractor on Army cantonment construction at Fort Dix, N.J.

Cost-Plus-Fixed-Fee Contracts

The new type of contract extensively used in government work is the cost-plus-a-fixed-fee, which has replaced the old lump sum award of the past. In discussing the features of this type of contract, Henry C. Turner, president of the Turner Construction Co., pointed out that it speeds up work by starting construction in advance of the time that plans and specifications could be prepared with the completeness necessary for sound competitive bidding. Also of importance, it establishes a co-operative arrangement under which the owner, the architect and the builder have a common incentive to use their full knowledge and effort to produce well-planned, well-executed work in the most economical manner as rapidly as possible.

Mr. Turner pointed out that in April, 1939, the Bureau of Yards and Docks of the U.S. Navy was authorized by Congress to employ the cost-plus-a-fixed-fee method in the award of emergency construction contracts. As a result, more than a year has been saved in the construction of Naval air bases in the Pacific, a series of projects for which contracts were awarded to the Turner Co., the Raymond Concrete Pile Co., and the Hawaiian Dredging Co.

A similar type of contract has also been authorized by the War Department and is now applying to emergency army construction work.

"It must be remembered," Mr. Turner continued, "that under this form of contract, the owner pays only the actual cost and this might be lower than under competitive bidding through the elimination of contingency allowances which the builder includes under lump-sum bidding. This is a favorable probability,

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"During the period of the development of the plans and specifications, markets can be studied so as to take advantage of favorable opportunities in the selection and purchase of materials. This is particularly important in times like these.

"It is obvious that the selection of a properly qualified builder is of the utmost importance. Salient points determining his selection should be concerned with his record on both fee and lump-sum contracts; his relationship in the past with owners and architects; his organization and personnel; his method of operation; his financial status and his credit record."

According to Mr. Turner, the attitude of the Bureau of Yards and Docks of the United States Navy with reference to its cost-plus-a-fixed-fee policy was admirably summed up recently as follows, in a booklet which states:

"A correct concept of the government cost-plus-a-fixed-fee contract involves three vital propositions. First, the contracting officer representing and speaking for the United States, and all of his administrative assistants, must be competent and possess a clear understanding of the peculiar relationships of the parties to the contract. Second, the contractors must be experienced, reliable, and conscientious, energetic, resourceful, and also have a clear understanding of the peculiar relationships of the parties. Third, there must be a high degree of cooperative confidence and trust by each of the parties in the other and this confidence and trust must extend throughout the organization of each party."

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Authoritative information about the designing, construction and financing of buildings can be found in up-to-date books. We will be glad to recommend suitable books on any subject you are interested in.

BUILDER AND BUILDING AGE

**BOOK
SERVICE
DEPARTMENT**

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NEW YORK CITY

EVERY BATHROOM NEEDS THIS Extra HEAT

You need this bathroom heat every day in the year. When it's too warm for unit heat or too cold for unit heat alone—Thermador Built-In Bathroom Heaters

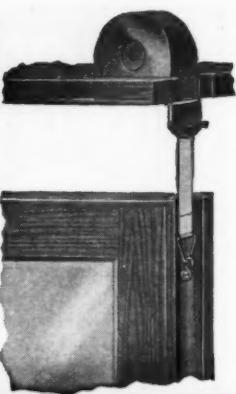
are the answer. Just a flip of the switch and you are instantly blanketed from head to heels in flameless, fumeless, economical electric warmth.

Write to
Thermador Electrical Mfg. Co.
5119 So. Riverside Drive
Los Angeles, California

Thermador ELECTRIC BATHROOM HEATERS

for WEATHER-TIGHT WINDOWS

The best weatherstrip or caulking can't make a box frame weather tight. Ask your dealer or sash and door jobber to show you a weatherstripped unit window, balanced by Pullman. There's a window without chance for leakage of cold air or dust, a frame you can pack insulation right up against, a sash that moves freely and stays where it's put without help of friction.



PULLMAN UNIT SASH BALANCE



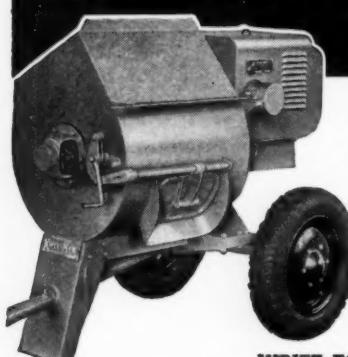
End leaky, messy, dirty breaks between tub, wall and floor. Quick, simple. Guaranteed permanent and leakproof. Cheaper than constant, costly repairs. Fit all types of tubs.

SEND FOR
FREE
CATALOG
TODAY



W. B. LUCKE, Inc.
WILMETTE
ILLINOIS

NON-ТИLTING PLASTER-MORTAR KWIK-MIX 6-P



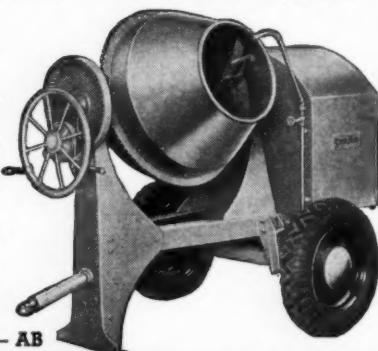
Fast discharge — 7 seconds — no tilting necessary — weighs only 850 pounds — air-cooled engine — V-belt and worm drive.

WRITE FOR BULLETIN NP — AB

3½-S TILTING KWIK-MIX

Side discharge — anti-friction bearings — welded construction — discharge either side — spring mounting.

WRITE FOR BULLETIN SD — AB



KWIK-MIX CONCRETE MIXER CO.
PORT WASHINGTON . . . WISCONSIN

How Builder O'Neill Sells

(Continued from page 40)

the basement as to make most of the basement space usable. Bathroom fixtures are by Kohler. We use rock lath, Lockaire or Fir-Tex wall construction, on cement block foundations. Rock wool insulates the ceilings."

Another feature that invites favorable consideration of his homes is the large size of the lots he chooses to build on. They are never less than 40 feet. Those in the 1940 project are 43 x 129 feet, allowing over 16 feet between houses.

When a project is contemplated, the material for the entire undertaking is purchased at one time and held by the respective suppliers until wanted. The ordering out of needed supplies is thoroughly systematized. As each progressive step is taken in construction of the building, the supplies are ordered by lot number.

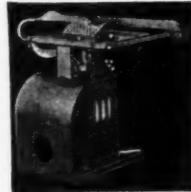
For instance, when a certain house is ready for roughing in, the office merely telephones the lumber yard and specifies the lot number where the supplies are needed. The yard, having a complete list of measurements of all the various requirements, selects the full complement of lumber intended for the roughing-in of the specified house and delivers only that much. Each supplier knows exactly what supplies must be furnished to complete each particular step in the construction of each house. The builder's office is not required to enumerate all the different items when additional supplies are called for.

Since the lumber is estimated on exact sizes required and is delivered when needed, there is very little, if any, waste. Furthermore, the practice of delivering materials to the job piecemeal reduces to a great extent losses from pilferage on the job.

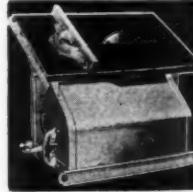
It is easily realized that this whole plan is designed to cut all corners in order to achieve all possible savings.

New C.M.C. KOSTKUTTER POWER SAWS

FOR HIGH SPEED PRECISION SAWING!



Left — Kost Kutter Jr. Fast, powerful, built to last. 3.6 H.P. Briggs & Stratton Engine. Cuts up to 3½" stock.



Right — Kost Kutter Sr. Husky, streamlined, sawdust proofed. Cuts up to 4" stock. Has 6 H.P. air-cooled engine or electric motor.

Write for new CMC catalog of latest Mixers, Pumps, Saws, Hoists, Carts and Barrows.

CONSTRUCTION MACHINERY COMPANY — WATERLOO, IOWA



both in time and materials. Having all construction work concentrated in one area also helps to effect these desired results.

By specializing in one standard floor plan, deviating from it only in cases where suggested changes would involve little extra work to satisfy an owner's individual requirements, Mr. O'Neill is able to follow pretty well a standardized routine which makes for smooth efficiency and economical construction. This reflects itself to advantage in the final selling price and permits him to give what the public is looking for in homes priced well below \$6,000.

The O'Neill organization maintains its own display rooms for bathroom fixtures, lighting fixtures, tile, linoleum, shades, etc., where the home-buyers are given the opportunity to choose their interior appointments.

Newspaper advertising serves a good purpose, in Mr. O'Neill's opinion. Instead of starting out aimlessly on a Sunday on an expedition of "looking," the home-seekers use the O'Neill advertisement as a stimulus which directs them to a specific destination.

Of the many telephone inquiries received from prospective purchasers, one out of ten are converted into buyers. All the deals are closed in Mr. O'Neill's office by Mr. Dennis O'Neill. He has no selling organization.

As an extra measure of service in an effort to make sure that buyers are satisfied, Mr. O'Neill sends one of his men to the new house-owner, two weeks after the latter has moved in, for the definite purpose of asking the owner to check anything that may be wrong. The list is picked up a day or two later and arrangements are promptly made to correct even the most minor complaints.

This is, it may be assumed, an important link in building a chain of 10,000 customers, which most builders will agree is a goal well worth attaining!

FIRZITE

THE SUPERIOR FIR PLYWOOD PREFINISHER

FIRZITE tames "wild," raised grain, helps eliminate hairline checking in Fir Plywood. Enables subsequent materials to "take" better, producing rich, smooth finished effects. A big help to Contractors on both regular and "DRI-BILT" construction. A profit-builder for Dealers. Made by specialists with years of experience in the development of fine natural wood finishes.



BREINIG BROTHERS
HOBOKEN NEW JERSEY
PAINT

Your letterhead
and this ad
bring you FREE
"Firzited" panel
and full de-
tails. Write
Dept. AB.

CAST YOUR 1940 VOTE
FOR
BETTER PROFITS
WITH
FLINTKOTE

THE FLINTKOTE COMPANY
30 ROCKEFELLER PLAZA, NEW YORK, N. Y.
Chicago • New Orleans • Atlanta
Boston • Detroit • Waco • Los Angeles



WEISWAY

Cabinet Showers

BUILD added sales appeal into every home you construct—large or small, simple or luxurious—by using these modern, leak proof cabinet showers. Extra baths easily possible in small space. Patented Foot-Grip. No-Slip floor of vitreous porcelain. Send now for details and specification data, without obligation.

HENRY WEIS MFG. COMPANY, INC.
1101 OAK STREET, ELKHART, INDIANA



Savutime Saves Builders Money And Sells Homes

Savutime and side-arm heater together cost only a fraction as much as ordinary automatic hot water systems, enabling builders to cut costs and still offer advantages of automatic hot water. The convenience, economy and safety of Savutime appeal instantly to new-home prospects. It's these visible attributes of a home that labels it as a "builder's" and actually helps to sell. Builders can point to Savutime as a special feature that reduces gas consumption 30 - 60%. Write for literature and name of nearest distributor.

SAVUTIME
GAS WATER HEATER
PUSH-BUTTON CONTROL

MULTIPLE CUTS
WITH A *Mall Saw*
CUT COSTS
FOR BUILDERS

MODEL 85
CAPACITY 2 3/4"

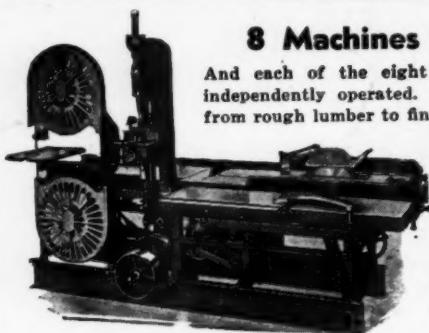
BALANCED FOR SAFE ONE-HAND USE WITH GREATEST WEIGHT ON LONG END OF BOARD

Profit minded builders everywhere are cutting costs by determining in advance the exact number of each framing member a job requires and then cutting them all at one time with a MALLSAW. Important savings can also be made with this fast powerful saw in pocket cuts, mitreing, dadoing, grooving, ploughing and tenoning. In addition, it is readily adaptable for cutting metal, stone, slate and sawing with an abrasive wheel. You can prove this on your next job at our expense. Mail Coupon TODAY and ask for a FREE Demonstration.

MALL TOOL COMPANY 7737 South Chicago Avenue
Chicago, Illinois
Successors to **WAPPAT INCORPORATED** AND **WAPPAT GEAR WORKS**
Manufacturers of former **WAPPAT** and **ALTA** products.

Please send free folder on **MALLSAWS**, **MALL RADIAL SAW ARM**, **MALL DOOR MORTISERS**, **DOOR PLANES**, **DRILLS**.

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Street
City State



8 Machines in One!
And each of the eight is full-sized and independently operated. Does complete job from rough lumber to finest trim and finish.

**NEW MODEL "A"
PLANING MILL
SPECIAL**

Low in cost and in operating expense. Takes small space because of compact build. Built for long, hard service.

Complete line of individual and combination machines
Good Woodworking Machines Since 1887

THE PARKS WOODWORKING MACHINE CO.
Dept. BL-11 1524 Knowlton Street Cincinnati, Ohio

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This Free Trial Lesson on "How to Read Blue Prints," and a set of blue prints plans—sent to show you how this 37 year old School for Builders makes it easy for men in the building industry to lay out and run jobs, read blue prints, estimate costs, superintend construction, etc. Drawing of plans included if wanted.

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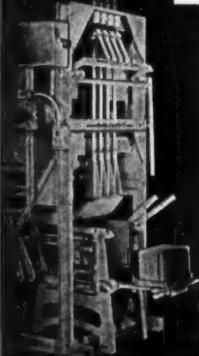
MADE TO SUIT YOUR REQUIREMENTS FOR THE INTERIOR AND EXTERIOR.

Send measurements and we will send suitable illustrations. Write for our latest Folder.

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CINCINNATI IRON FENCE CO. INC.
CINCINNATI, OHIO

**LOW COST MACHINE
BLOCK-BRICK-TILE**



SUCCESS equipment assures profitable products plants.

BECAUSE—they are efficient, self-contained, offering lowest production cost with lowest maintenance.

BECAUSE—they produce a complete range of products, all sizes and faces of block, on plain pallets.

BECAUSE—they make block, building tile and brick by interchanging simple production machines.

ALL THESE ADVANTAGES with minimum investment in equipment. All planned for easy expansion as your business justifies.

INVESTIGATE. Start now to bigger profits. Write today for free catalog. SUCCESS plant from \$190.00 up shipped on 15 days trial.

CONCRETE EQUIPMENT COMPANY
514 Ottawa Ave. Holland, Michigan

PIONEERS OVER 30 YEARS

**There's PROFIT in
ALLMETAL
WEATHERSTRIP**

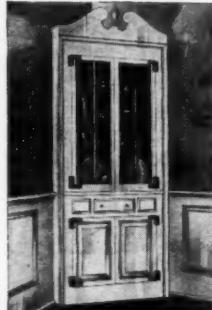
**EASIER INSTALLED
MORE EFFICIENT**

Every home should have ALLMETAL weatherstrips on doors and windows. Home buyers demand it. Architects recommend it. You can make EXTRA PROFITS installing these well known, consistently good weatherstrips.

Write for our prices on Metal Weatherstrip, Calking Compound, Metal Thresholds, Metal Wall Board Trim, Counter Edging, Sink Rims, etc.

ALLMETAL
NAME ALLMETAL REGISTERED U. S. PATENT OFFICE
231 West Ohio Street CHICAGO
OVER 25 YEARS SATISFACTORY SERVICE

A Fast Selling, Money-Making Item



**BILT-WELL
CORNER CHINA CABINETS**

An Ideal Christmas Gift

HERE is a standardized line of Corner Cabinets that is designed for beauty—built for permanence—priced to sell. BILT-WELL craftsmanship assures precision fitting and easy, trouble-free installation. Roomy shelves are adjustable. Close fitting doors help keep out dust. Prompt shipment from stock.

Pick up extra sales by stressing BILT-WELL Corner Cabinets as a delightfully acceptable Christmas gift for wives. A practical and lasting gift that will be enjoyed for years and years. Write today for Free literature and full details.

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CARR, ADAMS & COLLIER COMPANY
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MILL WORK Manufacturers of Famous BILT-WELL Millwork

**FLOATING ACTION
"UNI-ROL"
GARAGE
DOOR**

The popular price of this "QUALITYBILT" smooth operating door creates real sales volume. Easy to install. Only 1 3/4" headroom and 2 1/2" sideroom needed.

If your dealer can't supply you write us, Dept. AB-1140

FARLEY & LOETSCHER MFG. COMPANY
"QUALITYBILT" WOODWORK DUBUQUE, IOWA

Only \$28.00

For all Panel Style 16 Panels!
Glazed 4 Lights . . . Slightly Higher Price!
Retail Price any U. S. Jobbing Center East of
Rocky Mountain

Complete with
Stanley "Swing
Hinge", Hard
Bronze Cylinder
Lock and Metal
Weatherstrip.

Doors 1 3/8" thick. Prefitted
for 8-0 x 7-0
and 8-0 x 6-6
openings.

**How to build light-weight, sound-resistant
LOW COST FLUSH DOORS!**

Frame a piece of 1" insulating board with 1" x 2" wood, letting in extra wood for the lock. Casco-glue a 3-ply plywood panel on each side covering the fibreboard and frame. Use "c" clamps at the edges, weights over the center.

Supplied in 1, 5, 10-lb. cans at Building Supply or Hardware Dealers

CASCO POWDERED
CASEIN GLUE